



---

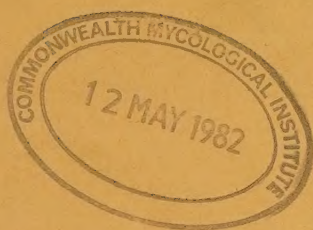
COMMONWEALTH AGRICULTURAL BUREAUX

---

# Review of applied entomology

Series B  
Medical and Veterinary

---





# COMMONWEALTH INSTITUTE OF ENTOMOLOGY

56 Queen's Gate, London SW7 5JR, UK  
Telephone : 01-584-0067

*Director and Editor:* N.C. Pant, M.Sc., D.I.C., Ph.D., F.N.A., F.I.Biol.

*Assistant Director/Editor:* A.H. Parker, M.Sc., Ph.D.

*Assistant Editor:* J.M.B. Harley, B.Sc.

*Scientific Information Officers:* Mrs. M.A. Greiff, B.A., Miss S.C. Huff, B.A., Miss J.J. Larkham, B.A., T.S. Robertson, B.Sc., G.A. Viney, M.Sc.

*Outside Abstractors:* R.F. Avery, M.A., Miss L.E. Cobb, B.A., R.G. Fennah, Sc.D., M.A., A.I.C.T.A.

*Distribution Maps:* R.J.A.W. Lever, B.Sc. D.I.C. F.L.S.

*Indexer:* A.M. Wood, B.A.

*Senior Editorial Assistant:* Miss J.K. Harvey

*Librarian:* C.J. Hamilton, A.L.A.

*Administrative Officer:* R.M. North

*Taxonomists:* Z. Boucek, R.N. Dr., C.Sc., Dr.Sc., J.D. Bradley, Ph.D., M.L. Cox, B.Sc., Ph.D., I.D. Gauld, M.I. Biol., M.S.K. Ghauri, M.Sc. Agr., Ph.D., D.I.C., K.M. Harris, B.Sc., Dip.Agr.Sc., D.T.A., J.D. Holloway, B.A., Ph.D., D. Macfarlane, B.Sc., R. Madge, M.S., Ph.D., B.R. Subba Rao, B.Sc., Assoc. I.A.R.I., Ph.D., D.Sc., F.A.Sc., T.G. Vazirani, M.Sc., Ph.D., D.Sc., D.J. Williams, B.Sc., Ph.D., D.Sc., F.I. Biol.

The function of the Commonwealth Institute of Entomology is to make available and disseminate information on insects and other arthropods of importance to man whether they are injurious or beneficial in their effects. It publishes Series A (Agricultural) and Series B (Medical & Veterinary) of the monthly *Review of Applied Entomology*, abstracting the applied entomological literature of the world, the *Bulletin of Entomological Research*, a quarterly research journal of applied entomology, *Distribution Maps of Pests* (18 per annum) and other publications at irregular intervals. The Institute also has a Library specialising in applied entomology open to the public, and an Identification Service located in the British Museum (Natural History), the services of which are available to any user. Along with 3 other Institutes and 10 Bureaux, it forms part of the Commonwealth Agricultural Bureaux, an organisation sponsored by Commonwealth governments for the dissemination of information on agricultural research and related subjects.

## *Annual Subscription Rate for Review of Applied Entomology*

To subscribers that are not members of CAB

£130.00 (Series A)

£ 65.00 (Series B)

The journal is available at a special rate to subscribers in countries which make a financial contribution to CAB (these countries are listed on the inside back cover).

*Back volumes* are available with discounts of up to 50% on orders of over 10 volumes. Microform editions are available at 80% the price of paper editions.

*Orders and enquiries* concerning subscriptions and back volumes should be sent to CENTRAL SALES, COMMONWEALTH AGRICULTURAL BUREAUX, FARNHAM HOUSE, FARNHAM ROYAL, SLOUGH SL2 3BN, UK. Please note that prices are subject to change without notice.

*Photocopies* of most abstracted papers can be supplied by the Institute at 20p per page in UK, or 25p per page elsewhere by air mail; minimum charge £2 per paper. An application and copyright declaration form is printed inside this issue. This form (which may be copied) should be signed and returned to the Institute.

© Commonwealth Agricultural Bureaux, 1982. All rights reserved. No part of this publication may be produced in any form or by any means, electronically, mechanically, by photocopying, recording or otherwise, without the prior permission of the copyright owner.

The Executive Council of the Commonwealth Agricultural Bureaux is a signatory to the Fair Copying Declaration, details of which can be obtained from The Royal Society, 6 Carlton House Terrace, London SW1.

The Commonwealth Agricultural Bureaux organisation does not accept responsibility for any trade advertisement included in this publication.

# REVIEW OF APPLIED ENTOMOLOGY

**Series B - Medical and Veterinary**

**Volume 69**



*Prepared by*

**Commonwealth Institute of Entomology, London**

**1981**




ISSN 0305-0084

© *Commonwealth Agricultural Bureaux 1982*

All rights reserved. No part of this publication may be reproduced in any form or by any means, electronically, mechanically, by photocopying, recording or otherwise, without the prior permission of the copyright owner.

The Executive Council of the Commonwealth Agricultural Bureaux is a signatory to the Fair Copying Declaration, details of which can be obtained from The Royal Society, 6 Carlton House Terrace, London, S.W.1.



*published by*

Commonwealth Agricultural Bureaux,  
Farnham House, Farnham Royal,  
SLOUGH SL2 3BN, UK.

*printed by*

Unwin Brothers Ltd., The Gresham Press, Old Woking, Surrey, UK.



# COMMONWEALTH AGRICULTURAL BUREAUX

The Commonwealth Agricultural Bureaux (CAB) is a co-operative venture established by Commonwealth Governments to provide information and other specialized services for scientists and professional workers in agriculture and related fields. The organization is controlled by an Executive Council composed of nominees of the various Commonwealth Governments, including one for the Dependent Territories. The following pages list the present members of the Executive Council, and Liaison Officers who form the primary link in the member country.

CAB has three main functions: a world agricultural information service, an identification service for entomology, mycology and helminthology, and a biocontrol service. CAB's information service is based on 46 abstract journals which, taken together, cover the whole range of agricultural science. Contemporary world literature in many languages is scanned for items worthy of noting by abstract or titles in the journals. Since 1973 all references have been made available in machine-readable form for batch searching and online retrieval. The database contains approximately 1,100,000 records and is increasing by 12,000 per month. Other publications include technical periodicals, annotated bibliographies, review articles and books. An information retrieval service ensures that individual needs are met, and also supplies photocopies of source papers.

The work of CAB is largely carried out through a number of Institutes and Bureaux, each dealing with a particular aspect of agricultural science. Enquiries on scientific aspects of CAB work should be sent to the Director of the appropriate Bureau. Other enquiries should be sent to the Executive Director, CAB, at the address below, or to Liaison Officers in member countries.

## *Headquarters*

Farnham House, Farnham Royal, Slough SL2 3BN, UK  
Tel: Farnham Common (02814) 2281  
Telex: 847964  
Cables: COMAG, SLOUGH

*Executive Director:* N.G. Jones, DFC, BSc  
*Editorial Director:* J.R. Metcalfe, MA, PhD  
*Scientific Adviser:* E.K. Woodford, OBE, MSc, PhD  
*Scientific Assistant:* D.L. Hawksworth, PhD, DSc, FLS

## *Institutes*

*Commonwealth Institute of Entomology*, 56 Queen's Gate, London SW7 5JR, Tel: 01-584-0067/8

*Director:* N.C. Pant, MScAgr, DIC, PhD, FNA, FIBiol.

*Commonwealth Mycological Institute*, Ferry Lane, Kew, Richmond TW9 3AF. Tel: 01-940-4086/7

*Director:* A. Johnston, BSc, AICTA, FIBiol.

*Commonwealth Institute of Biological Control*, Gordon Street, Curepe, Trinidad, West Indies. Tel: St. Augustine (662) 4173

*Director:* F.D. Bennett, BSA, PhD.

*Commonwealth Institute of Parasitology*, 395A Hatfield Road, St. Albans, AL4 0XU, Herts., Tel: St. Albans (0727) 33151

*Director:* R.L.J. Muller, BSc., PhD.

## *Bureaux*

*Agricultural Economics*, Dartington House, Little Clarendon Street, Oxford OX1 2HH. Tel: Oxford (0865) 59829.

*Director:* P.G. Stonham, PhD.

*Animal Breeding and Genetics*, Animal Breeding Research Organization, The King's Buildings, West Mains Road, Edinburgh EH9 3JX. Tel: Edinburgh (031) 667-6901.

*Director:* J.D. Turton, BSc, MRCVS, DTVM.

*Animal Health*, Central Veterinary Laboratory, New Haw, Weybridge, KT15 3NB, Surrey. Tel: Byfleet (9973) 42826

*Director:* R.M. Mack, FRCVS.

*Dairy Science & Technology*, Lane End House, Shinfield, Reading RG2 9BB. Tel: Reading (0734) 883895

*Director:* E.J. Mann, NDD, CDD.

*Forestry*, Commonwealth Forestry Institute, South Parks Road, Oxford OX1 3RD. Tel: Oxford (0865) 57185

*Director:* W. Finlayson, BSc.

*Horticulture & Plantation Crops*, East Malling Research Station, Maidstone ME19 6BJ, Kent. Tel: West Malling (0732) 843833

*Director:* D.J. O'D. Bourke, MA, DipAgr, FLS.

*Nutrition*, Rowett Research Institute, Bucksburn, Aberdeen AB2 9SB. Tel: Bucksburn (0224) 712162

*Director:* A.A. Woodham, BSc, PhD, CChem, FRIC.

*Pastures & Field Crops*, Grassland Research Institute, Hurley, Maidenhead SL6 5LR. Tel: Littlewick Green (062 882) 3457

*Director:* P.J. Boyle, MA.

*Plant Breeding & Genetics*, Department of Applied Biology, Pembroke Street, Cambridge CB2 3DX. Tel: Cambridge (0223) 358381 (Ext. 216)

*Director:* Miss O. Holbeck, BSc.

*Soils*, Rothamsted Experimental Station, Harpenden AL5 2JQ, Herts. Tel: Harpenden (05827) 63133 (Ext. 271)

*Director:* B. Butters, MSc, DipAgr, DTA, DIC, ARCS.



# EXECUTIVE COUNCIL

(as at 1 September 1981)

| <i>Member</i>                |     |     |     |     |     | <i>Representing</i>   |
|------------------------------|-----|-----|-----|-----|-----|-----------------------|
| Dr. M. DHAR (Chairman)       | ... | ... | ... | ... | ... | India                 |
| Dr. B. HEALY (Vice-Chairman) | ... | ... | ... | ... | ... | New Zealand           |
| G.M.P. MYERS                 | ... | ... | ... | ... | ... | United Kingdom        |
| Dr. L.W. MORLEY              | ... | ... | ... | ... | ... | Canada                |
| Dr. A.E. PIERCE, CBE         | ... | ... | ... | ... | ... | Australia             |
| E.G. DAYANANDA               | ... | ... | ... | ... | ... | Sri Lanka             |
| Y.N. OHENE-AKRASI            | ... | ... | ... | ... | ... | Ghana                 |
| THE SECOND SECRETARY         | ... | ... | ... | ... | ... | Malaysia              |
| THE FIRST SECRETARY          | ... | ... | ... | ... | ... | Nigeria               |
| A. ANTONIADES                | ... | ... | ... | ... | ... | Cyprus                |
| H.E. THE HIGH COMMISSIONER   | ... | ... | ... | ... | ... | Sierra Leone          |
| Mrs. L.E. HOWELL             | ... | ... | ... | ... | ... | Tanzania              |
| Miss H. GOULBOURNE           | ... | ... | ... | ... | ... | Jamaica               |
| THE FIRST SECRETARY          | ... | ... | ... | ... | ... | Trinidad & Tobago     |
| A.L. MUKASA-ZIRIMENYA        | ... | ... | ... | ... | ... | Uganda                |
| E.N. BIRICHI                 | ... | ... | ... | ... | ... | Kenya                 |
| H.E. THE HIGH COMMISSIONER   | ... | ... | ... | ... | ... | Malawi                |
| THE TRADE COMMISSIONER       | ... | ... | ... | ... | ... | Zambia                |
| Mrs. AMIE DIABBA-BOJANG      | ... | ... | ... | ... | ... | The Gambia            |
| C. BARKER                    | ... | ... | ... | ... | ... | Guyana                |
| H.E. THE HIGH COMMISSIONER   | ... | ... | ... | ... | ... | Botswana              |
| T. NARRAINEN                 | ... | ... | ... | ... | ... | Mauritius             |
| S. KANGWAI                   | ... | ... | ... | ... | ... | Fiji                  |
| S.A.L.M. MUSTAKIM            | ... | ... | ... | ... | ... | Bangladesh            |
| H.E. THE HIGH COMMISSIONER   | ... | ... | ... | ... | ... | The Bahamas           |
| P. TAMEI                     | ... | ... | ... | ... | ... | Papua New Guinea      |
| (to be appointed)            | ... | ... | ... | ... | ... | Zimbabwe              |
| D.G. OSBORNE                 | ... | ... | ... | ... | ... | Dependent Territories |

Dr. D.A. ALI, Secretary, Commonwealth Science Council (Observer)

N.G. JONES, DFC, BSc (Executive Director)

## LIAISON OFFICERS

(as at 1 September 1981)

| <i>Contributing country</i> | <i>Liaison Officer</i>         | <i>Address</i>  |
|-----------------------------|--------------------------------|---|
| United Kingdom              | Under Secretary                | Agricultural Research Council,<br>160 Great Portland Street,<br>London W1N 6DT.                                   |
| Canada                      | Mr. R.M. Prentice              | Program Coordinator, Crop Protection Research Branch,<br>Agriculture Canada,<br>Ottawa, Ontario, Canada, K1A 0C5. |
| Australia                   | J.B. Allen, BSc, PhD           | Commonwealth Scientific and Industrial Research Organization,<br>PO Box 225, Dickson, ACT 2602.                   |
| New Zealand                 | G.W. Butler, MSc, Fildr, FRSNZ | Assistant Director-General,<br>Department of Scientific and Industrial Research,<br>Private Bag, Wellington.      |



|                   |   |  |
|-------------------|---|--|
| India             | O.P. Gautam, PhD                                | Director-General,<br>Indian Council of Agricultural Research,<br>Krishi Bhavan, New Delhi 110001.                                  |
| Sri Lanka         | G.W.E. Fernando, BSc, MSc, PhD.                 | Senior Deputy Director of Agriculture<br>(Research), Department of Agriculture,<br>Peradeniya.                                     |
| Ghana             | Executive Chairman                              | Council for Scientific and Industrial<br>Research,<br>PO Box M.32, Accra.  |
| Malaysia          | Permanent Secretary                             | Ministry of Agriculture & Cooperatives,<br>Swettenham Road, Kuala Lumpur.  |
| Nigeria           | The Director                                    | Agricultural Sciences Research Depart-<br>ment,<br>Moor Plantation, Private Mail Bag<br>No. 5382, Ibadan.                          |
| Cyprus            | A. Papasolomontos, PhD                          | Director-General,<br>Ministry of Agriculture and Natural<br>Resources, Nicosia.  |
| Sierra Leone      | Senior Lecturer                                 | Njala University College,<br>University of Sierra Leone,<br>PMB, Freetown.   |
| Tanzania          | Director of Agriculture                         | Ministry of Agriculture,<br>PO Box 9071,<br>Dar-es-Salaam.   |
| Jamaica           | Karl E. Wellington, PhD                         | Research & Development Department,<br>Ministry of Agriculture,<br>PO Box 480, Kingston 6.  |
| Trinidad & Tobago | Chief Technical Officer (Crop<br>Research)      | Ministry of Agriculture,<br>Central Experiment Station, Centeno,<br>via Arima Post Office, Trinidad.                               |
| Uganda            | Permanent Secretary                             | Ministry of Agriculture & Forestry,<br>PO Box 102, Entebbe.  |
| Kenya             | Director of Agriculture                         | Ministry of Agriculture,<br>PO Box 30028, Nairobi.   |
| Malawi            | Chief Agricultural Research Officer             | Ministry of Agriculture and Natural<br>Resources,<br>PO Box 30134, Capital City,<br>Lilongwe 3.                                    |
| Zambia            | Permanent Secretary                             | Ministry of Rural Development,<br>PO Box RW.197, Lusaka.   |
| The Gambia        | Permanent Secretary                             | Ministry of Agriculture and Natural<br>Resources,<br>The Quadrangle, Banjul.   |
| Guyana            | Deputy Chief Agricultural Officer<br>(Research) | Ministry of Agriculture,<br>PO Box 1001, Georgetown.   |
| Botswana          | Permanent Secretary                             | Ministry of Agriculture,<br>Common Service Division,<br>Private Bag 0028, Gaborone.  |
| Mauritius         | B.D. Roy  | Chief Agricultural Officer,<br>Agricultural Services, Reduit.  |
| Fiji              | Permanent Secretary                             | Ministry of Agriculture, Fisheries and<br>Forests,<br>Rodwell Road, Suva.  |
| Bangladesh        | K.M. Badruddoza, MAg,<br>PhD, DipGenPtBr.       | Director,<br>Bangladesh Agricultural Research In-<br>stitute<br>Farm Gate (Sher-e-Bangla Nagar)<br>New Air Port Road, Dacca-7.     |
| The Bahamas       | Director of Agriculture                         | Ministry of Agriculture, Fisheries &<br>Local Government,<br>PO Box 3028, Nassau.  |
| Papua New Guinea  | Mr. N.J. Natera, The Secretary                  | The Department of Primary Industry,<br>PO Box 2417, Konedobu.  |
| Zimbabwe          | G.W. Herd                                       | Head, Plant Protection Research In-<br>stitute,<br>Ministry of Agriculture,<br>PO Box 8100, Causeway, Salisbury.                   |
| Solomon Islands   | B.J.F. Russell                                  | Permanent Secretary,<br>Ministry of Agriculture and Lands,<br>Solomon Islands Government,<br>PO Box G11, Honiara, Solomon Islands. |



# COMMONWEALTH INSTITUTE OF ENTOMOLOGY

56 QUEEN'S GATE, LONDON SW7 5JR, UK

TELEPHONE : 01-584-0067

Identification Service : c/o British Museum (Natural History),  
Cromwell Road, London SW7 5BD, UK

## *Director and Editor:*

N.C. Pant, M.Sc., D.I.C., Ph.D., F.N.A., F.I. Biol.

## *Assistant Director/Editor:*

A.H. Parker, M.Sc., Ph.D.

## *Assistant Editor:*

J.M.B. Harley, B.Sc.

## *Scientific Information Officers:*

Mrs. M.A. Greiff, B.A.

Miss J.J. Larkham, B.A.

Miss S.C. Huff, B.A.

T.S. Robertson, B.Sc.

G.A. Viney, M.Sc.

## *Outside Abstractors:*

R.F. Avery, M.A.

Miss L.E. Cobb, B.A.

R.G. Fennah, ScD., M.A. A.I.C.T.A.

## *Distribution Maps:*

R.J.A.W. Lever, B.Sc., D.I.C., F.L.S.

## *Indexer:*

A.M. Wood, B.A.

## *Senior Editorial Assistant:*

Miss J.K. Harvey

## *Librarian:*

C.J. Hamilton, A.L.A.

## *Administrative Officer*

R.M. North

## *Taxonomists:*

Z. Boucek, R.N. Dr., C.Sc., Dr.Sc.

J.D. Holloway, B.A., Ph.D.

J.D. Bradley, Ph.D.

D. Macfarlane, B.Sc.

M.L. Cox, B.Sc., Ph.D.

R. Madge, M.S., Ph.D.

I.D. Gauld, M.I. Biol.

B.R. Subba Rao, B.Sc., Assoc.

M.S.K. Ghauri, M.Sc. Agr., Ph.D.,  
D.I.C.

I.A.R.I., Ph.D.

K.M. Harris, B.Sc., Dip. Agr.Sc.,

T.G. Vazirani, M.Sc., Ph.D., D.Sc.

D.T.A.

D.J. Williams, B.Sc., Ph.D., D.Sc.,

F.I. Biol.

The function of the Commonwealth Institute of Entomology is to make available and disseminate information on insects and other arthropods of importance to man whether they are injurious or beneficial in their effects. It publishes Series A (Agricultural) and Series B (Medical & Veterinary) of the monthly *Review of Applied Entomology*, abstracting the applied entomological literature of the world, the *Bulletin of Entomological Research*, a quarterly research journal of applied entomology, *Distribution Maps of Pests* (18 per annum) and other publications at irregular intervals. The Institute also has a Library specialising in applied entomology open to the public, and an Identification Service located in the British Museum (Natural History), the services of which are available to any user. Along with 3 other Institutes and 10 Bureaux, it forms part of the Commonwealth Agricultural Bureaux, an organisation sponsored by Commonwealth governments for the dissemination of information on agricultural research and related subjects.



|  |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |     |     |
|--|-----|-----|-----|-----|-----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| TAXONOMY   | ... | ... | ... | ... | ... | 7  | 45 | 71 | 99  | 131 | 185 | 213 | 251 | 287 | 317 | 353 | 393 |
| ANATOMY, MORPHOLOGY  | ... | ... | ... | ... | ... | 7  | 45 | 71 | 99  | 131 | 185 | 213 | 251 | 287 | 317 | 353 | 393 |
| REPRODUCTION AND DEVELOPMENT                                     | ... | ... | ... | ... | ... | 7  | 45 | 71 | 99  | 131 | 185 | 213 | 251 | 287 | 317 | 353 | 393 |
| PHYSIOLOGY AND BIOCHEMISTRY                                      | ... | ... | ... | ... | ... | 7  | 45 | 71 | 99  | 131 | 185 | 213 | 251 | 287 | 317 | 353 | 393 |
| GENETICS AND STERILITY   | ... | ... | ... | ... | ... | 7  | 45 | 71 | 99  | 131 | 185 | 213 | 251 | 287 | 317 | 353 | 393 |
| ECOLOGY AND BEHAVIOUR  | ... | ... | ... | ... | ... | 7  | 45 | 71 | 99  | 131 | 185 | 213 | 251 | 287 | 317 | 353 | 393 |
| GEOGRAPHICAL DISTRIBUTION,<br>FAUNAS                             | ... | ... | ... | ... | ... | 7  | 45 | 71 | 99  | 131 | 185 | 213 | 251 | 287 | 317 | 353 | 393 |
| TECHNIQUES AND APPARATUS   | ... | ... | ... | ... | ... | 7  | 45 | 71 | 99  | 131 | 185 | 213 | 251 | 287 | 317 | 353 | 393 |
| ARTHROPODS OF MEDICAL AND<br>VETERINARY IMPORTANCE               | ... | ... | ... | ... | ... | 7  | 45 | 71 | 99  | 132 | 186 | 213 | 251 | 288 | 318 | 353 | 393 |
| Blattaria  | ... | ... | ... | ... | ... | 9  | 47 | 73 | 102 | 148 | 188 | 217 | 252 | 289 | 320 | 357 | 396 |
| Mallophaga   | ... | ... | ... | ... | ... | 10 | 48 | 74 | 105 | 149 | 189 | 219 | 253 | 290 | 323 | 358 | 397 |
| Anoplura   | ... | ... | ... | ... | ... | 11 | 48 | 74 | 105 | 150 | 190 | 219 | 253 | 290 | 323 | 358 | 397 |
| Hemiptera  | ... | ... | ... | ... | ... | 11 | 49 | 74 | 105 | 150 | 190 | 219 | 254 | 290 | 324 | 359 | 397 |
| Reduviidae   | ... | ... | ... | ... | ... | 11 | 49 | 74 | 105 | 150 | 190 | 219 | 254 | 290 | 324 | 359 | 397 |
| Cimicidae  | ... | ... | ... | ... | ... | 12 | —  | 75 | —   | 151 | 191 | 220 | —   | 291 | 324 | 360 | 399 |
| Other Hemiptera  | ... | ... | ... | ... | ... | —  | —  | 75 | —   | —   | —   | —   | 255 | —   | —   | —   | —   |
| Siphonaptera   | ... | ... | ... | ... | ... | 12 | 50 | 75 | 106 | 151 | 192 | 220 | 255 | 291 | 324 | 360 | 399 |
| Diptera  | ... | ... | ... | ... | ... | 13 | 51 | 76 | 107 | 152 | 193 | 221 | 255 | 296 | 325 | 361 | 400 |
| Culicidae  | ... | ... | ... | ... | ... | 13 | 51 | 76 | 107 | 152 | 193 | 221 | 255 | 296 | 326 | 361 | 400 |
| Ceratopogonidae  | ... | ... | ... | ... | ... | 22 | 56 | 82 | 112 | 159 | 198 | 231 | 270 | 300 | 333 | 371 | 412 |
| Phlebotominae  | ... | ... | ... | ... | ... | 23 | 57 | 83 | 112 | 160 | 199 | 231 | 271 | 301 | 334 | 372 | 413 |
| Simuliidae   | ... | ... | ... | ... | ... | 24 | 58 | 83 | 113 | 161 | 199 | 231 | 272 | 301 | 335 | 373 | 413 |
| Glossinidae  | ... | ... | ... | ... | ... | 25 | 59 | 84 | 113 | 165 | 200 | 233 | 273 | 302 | 337 | 374 | 415 |
| Oestridae, Gasterophilidae,<br>Cuterebridae                      | ... | ... | ... | ... | ... | 26 | 60 | 86 | 114 | 169 | 200 | 237 | 274 | 303 | 339 | 378 | 416 |
| Other Diptera  | ... | ... | ... | ... | ... | 26 | 60 | 86 | 114 | 170 | 201 | 237 | 274 | 304 | 339 | 378 | 417 |
| Other insect orders  | ... | ... | ... | ... | ... | 34 | 65 | 89 | 118 | 174 | 205 | 242 | 279 | 309 | 343 | 382 | 422 |
| Acari  | ... | ... | ... | ... | ... | 35 | 66 | 90 | 119 | 176 | 206 | 242 | 280 | 310 | 344 | 383 | 423 |
| Ticks (Ixodoidea)  | ... | ... | ... | ... | ... | 35 | 66 | 90 | 120 | 176 | 206 | 242 | 280 | 310 | 344 | 383 | 423 |
| Mites (other Acari)  | ... | ... | ... | ... | ... | 41 | 67 | 94 | 125 | 178 | 208 | 245 | 282 | 312 | 347 | 387 | 427 |
| Other Arachnida  | ... | ... | ... | ... | ... | 43 | 69 | 96 | 128 | 179 | 210 | 248 | 284 | 314 | 349 | 389 | 428 |
| Other arthropod classes  | ... | ... | ... | ... | ... | —  | —  | 96 | —   | —   | 210 | —   | —   | 315 | —   | 390 | 429 |
| DISEASES AND DISORDERS   | ... | ... | ... | ... | ... | 44 | 70 | 96 | 128 | 180 | 211 | 249 | 285 | 315 | 350 | 390 | 429 |
| PROTECTION AGAINST ARTHROPODS<br>AND USE OF ARTHROPODS FOR       | ... | ... | ... | ... | ... | 44 | 70 | 97 | 128 | 180 | 211 | 249 | 285 | 315 | 351 | 390 | 429 |
| BIOLOGICAL CONTROL   | ... | ... | ... | ... | ... | 44 | 70 | 97 | 128 | 180 | 211 | 249 | 285 | 315 | 351 | 390 | 429 |
| Control measures   | ... | ... | ... | ... | ... | 44 | 70 | 97 | 128 | 180 | 211 | 249 | 285 | 315 | 351 | 390 | 429 |
| Unclassified   | ... | ... | ... | ... | ... | 44 | —  | 97 | 128 | —   | —   | 249 | —   | 315 | 351 | 390 | 429 |
| Biological control (including use of<br>pathogens)               | ... | ... | ... | ... | ... | 44 | 70 | —  | 128 | 180 | 211 | 249 | 285 | 315 | 351 | 390 | 429 |
| Control by toxic chemicals                                       | ... | ... | ... | ... | ... | 44 | 70 | 97 | 128 | 180 | 211 | 249 | 285 | 315 | 351 | 390 | 429 |
| Cultural control   | ... | ... | ... | ... | ... | —  | —  | —  | —   | —   | —   | —   | 285 | —   | —   | —   | —   |
| Deterrents (including repellents and<br>antifeedants)            | ... | ... | ... | ... | ... | 44 | —  | —  | —   | 180 | —   | —   | —   | —   | —   | —   | —   |
| Integrated control   | ... | ... | ... | ... | ... | —  | —  | —  | —   | 180 | —   | 249 | —   | —   | —   | 390 | 429 |
| Plant resistance   | ... | ... | ... | ... | ... | —  | —  | —  | —   | —   | —   | —   | —   | —   | —   | —   | —   |
| Pheromones, attractants, trapping                                | ... | ... | ... | ... | ... | 44 | —  | —  | —   | 180 | —   | 249 | 285 | —   | —   | 390 | 429 |
| Sterilisation and genetic control                                | ... | ... | ... | ... | ... | 44 | 70 | —  | 128 | 180 | 211 | 249 | 285 | —   | 351 | 390 | 429 |
| Surveys, loss estimates, forecasts                               | ... | ... | ... | ... | ... | 44 | 70 | 97 | 128 | 180 | 211 | —   | 285 | 315 | 351 | 390 | 429 |
| Legal aspects  | ... | ... | ... | ... | ... | —  | 70 | —  | —   | —   | 211 | —   | —   | —   | 351 | —   | 429 |
| CHEMICALS, INCLUDING TOXICITY<br>TESTS AND ENVIRONMENTAL EFFECTS | ... | ... | ... | ... | ... | 44 | 70 | 97 | 128 | 180 | 211 | 249 | 285 | 315 | 351 | 391 | 429 |
| ORGANISATIONS AND COMMUNICATION                                  | ... | ... | ... | ... | ... | 44 | 70 | 97 | 129 | 183 | 211 | 250 | 286 | 316 | 352 | 391 | 430 |
| AUTHOR INDEX   | ... | ... | ... | ... | ... |    |    |    |     |     |     |     |     |     |     |     | 431 |
| SUBJECT INDEX  | ... | ... | ... | ... | ... |    |    |    |     |     |     |     |     |     |     |     | 449 |

# ERRATA

(lines are counted from the beginning of the bibliographic data in each item.)

## Volume 69

| Page | Abstract | Line |  |
|------|----------|------|--|
| 14   | 61       | 7    | insert 'overwinter as a larva in a state of' after 'to'                |
| 83   | 634      | 8    | delete 'vector'  |
| 90   | 688      | 5    | insert ', Yugoslavia' after 'Veterinaria'                              |
| 91   | 697      | 10   | insert 'Mesocricetus auratus (' after 'host'                           |
| 91   | 697      | 10   | insert ') before 'on'  |
| 124  | 972      | 7    | for 'Haemaphysalis' read 'Haemaphysalis'                               |
| 132  | 1021     | 5    | for 'Ornithomyia' read 'Ornithomya'                                    |
| 134  | 1041     | 4    | for 'A. claviger' read 'Anopheles claviger'                            |
| 194  | 1530     | 9    | delete 'the use of'  |
| 194  | 1530     | 10   | delete 'in vegetation'   |
| 194  | 1530     | 11   | insert 'against mosquitoes.' after 'fenethacarb'                       |
| 229  | 1828     | 10   | insert 'equine' after 'Venezuelan'                                     |
| 244  | 1947     | 23   | for 'Tuleniy' read 'Tyuleniy'  |
| 248  | 1976     | 11   | for 'transmits plague [caused by Yersinia pestis]. read 'infests man.' |
| 256  | 2031     | 17   | insert '(Theo.) japonicus' before 'shintienensis'                      |
| 263  | 2086     | 13   | for 'Dixiidae' read 'Dixidae'  |
| 304  | 2412     | 14   | for '(1-methoxyethyl)benzene]' read '(1-methylethyl)benzene]'          |
| 304  | 2412     | 16   | for 'ethylphenoxy(-' read 'ethylphenoxy)-'                             |
| 383  | 3053     | 9    | for 'lanceatum' read 'dendriticum (lanceatum)'                         |
| 401  | 3195     | 17   | for 'A.' read 'Anopheles'  |
| 410  | 3277     | 8    | for 'P.' read 'Plasmodium'   |



## AUTHOR INDEX

- Abd-El-Fattah, A. S. A. 879  
 Abdel Gawaad, A. A. 1623  
 Abdel-Malek, A. A. 2634, 2635  
 Abdel Rahim, A. A. 1520  
 Abdel-Rahman, A. M. 2634, 2635, 2636  
 Abdel-Rehim, L. 366  
 Abdel-Wahab, K. S. 718  
 Abdel-Wahab, K. S. E. 2469, 2755  
 Abdu, R. M. 478, 1397, 2720  
 Abdullaev, A. A. 2513  
 Abdullah, M. E. 306  
 Abdurrahim, U. 1330  
 Abend, J. F. 2965  
 Abinanti, F. R. 2186  
 Abo-Elghar, M. R. 3394  
 Abonnenc, E. 422, 2390  
 Abou Zid, S. A. 562  
 Abreu, M. H. 2336  
 Abu-Samra, M. T. 777, 3418  
 Abul-Ela, S. M. 3344, 3345  
 Abul-hab, J. 3142  
 Acedo, C. Sánchez 340, 3419  
 Achterberg, C. van 2275  
 Ackerman, S. 1407, 3402  
 Ackermann, P. 1440  
 Acosta, M. 1828  
 Adak, T. 3222  
 Adam, C. 393, 2038  
 Adames, A. J. 2283  
 Adamkiewicz-Depczyk, M. 2707  
 Adamović, Ž. 3285  
 Adamović, Ž. R. 599  
 Adams, M. A. 2554  
 Adams, M. E. 207  
 Adams, T. S. 1342, 1343, 1910  
 Adamsky, G. 1093  
 Addison, E. M. 1296  
 Adekolu-John, E. O. 1322  
 Adham, F. K. 476, 2135, 2445, 2721  
 Adhami, N. 2300  
 Adhami, U. M. 100  
 Adityachaudhury, N. 2792  
 Adjukiewicz, A. 2037  
 Adlakha, V. 2602, 2603  
 Adler, V. E. 549  
 Adolph, R. 309  
 Adrian, H. 523  
 Aep, S. 1776  
 Aeschlimann, A. 2220, 2740, 2741  
 Affii, S. E. D. 1771  
 Agarwal, G. P. 1173, 2011, 2852  
 Agarwal, N. 2421  
 Agashkova, T. M. 198, 1893  
 Ageel, A. M. 306  
 Agrawal, G. P. 2568  
 Agrawal, O. P. 2551, 2840  
 Agricola, H. 2847  
 Agricultural Research Council, United Kingdom 2650  
 Agricultural Research Council, Zimbabwe 1405  
 Agricultural Research Institute, Kenya 1722  
 Agricultural Science Service, United Kingdom 3048  
 Agriculture Canada, Research Branch 2510  
 Aguesse, P. 3386  
 Aguiar, O. B. 1678  
 Ahmadnezhad, A. 503  
 Ahmed, S. 2497  
 Ahmed, S. H. 2634  
 Ahmed, T. 3233  
 Aidroos, K. Al- 596, 860  
 Aiken, S. R. 2130  
 Ainsley, R. W. 3239  
 Aitken, T. H. G. 614  
 Aiyedun, B. A. 1309  
 Aizawa, K. 1228  
 Aizin, B. M. 1688  
 Akesson, N. B. 2271  
 Akhmetzyanova, N. Sh. 1021  
 Akhtar, M. H. 1451  
 Akhtar, R. 2372  
 Akinboade, O. A. 1109  
 Akiyama, K. 1418  
 Akre, R. D. 2460  
 Al-Aidroos, K. 596, 860  
 Al-Janabi, B. M. 502  
 Al-Mashhadani, H. M. 616  
 Al-Okaily, A. K. 2917  
 Al-Saadi, S. H. 2917  
 Al-Shadebi, A. M. 3086  
 Alagón, A. B. C. 522  
 Alagón, A. C. 522  
 Alam, S. N. 1261  
 Alapatt, F. 1997  
 Alary, J. C. 2994  
 Albalá, F. 340  
 Albala Pérez, F. 2850  
 Albert, J. P. 3310  
 Albrecht, J. 1650  
 Aleksandrić, Lj. 3112  
 Alekseev, A. A. 1019  
 Alekseev, A. N. 867  
 Alekseev, E. V. 87  
 Aleraj, B. 237  
 Alexandrova, E. M. 1032  
 Alfaro, E. 3176  
 Alfred, J. R. B. 1595  
 Alger, N. E. 747  
 Ali, A. 912, 1366, 1905, 2412, 3024, 3346  
 Ali, M. 334, 1739  
 Aliev, M. I. 851, 853  
 Alirzaev, G. U. 852  
 Allan, S. A. 2614  
 Allan, W. G. L. 739  
 Allen, G. E. 3388  
 Allen, J. A. 77  
 Allison, C. E. Machado- 1824, 2643, 2644  
 Allison, F. 142  
 Allison, T. C. 349  
 Allmang, B. 3322  
 Allred, D. M. 1962, 2478  
 Altner, H. 1158  
 Altukhova, L. M. 3307  
 Alvarenga, N. J. 36  
 Alzuet, A. B. de 984  
 Amanguliev, A. 1636  
 Amanniyazova, R. D. 1636  
 Amanov, E. A. 955  
 Ambrosio, D. 758  
 Aminah, N. S. 1554, 1555, 1556  
 Ammar, E. D. 3344, 3345  
 Amrine, J. W. 1805  
 Anagnostakis, S. L. 1563  
 Ananthakrishnan, T. N. 2021, 3168  
 Andersen, S. O. 2189  
 Anderson, B. D. 1791  
 Anderson, J. F. 1398, 1563, 1603, 1921, 2443  
 Anderson, J. R. 1287, 2098, 2100, 2108, 2442, 3245, 3333  
 Anderson, N. L. 2415  
 Anderson, R. C. 2651  
 Anderson, R. J. 1442  
 Anderson, R. M. 2839, 3146  
 Andow, D. 751  
 Andrade, A. F. B. 2295  
 Andrade Luna Dias, A. P. 2399  
 Andrade, S. P. 2780  
 Andrade, Z. A. 1504  
 Andreadis, T. G. 1232, 2893  
 Andreeva, R. V. 1020, 2031, 2695, 3336  
 Andrews, C. L. 1155, 1679  
 Andrews, J. R. H. 518, 559  
 Andrews, R. H. 1951, 3401  
 Andrishena, L. G. 1030  
 Anez, N. 813  
 Angel, C. A. 700  
 Angerilli, N. D. P. 2617  
 Angerilli, N. P. D. 384, 1243, 2355, 2936  
 Angioy, A. M. 1370, 1614  
 Ankilov, A. N. 1218, 1982  
 Anthony, D. W. 1819, 2891  
 Anufrieva, V. N. 1758  
 Aoki, Y. 3363  
 Apperson, C. S. 2723  
 Applin, D. G. 3358  
 Aragón, L. del C. Calderón 1460  
 Arakawa, K. Y. 2501  
 Araki, S. 3369  
 Arata, A. A. 1194, 1230  
 Araujo, T. I. 906  
 Arbesman, C. E. 1386, 1630, 1634  
 Archer, M. E. 484  
 Arditi, R. 2201  
 Arends, J. J. 908  
 Argiro, V. 2008  
 Arias, J. 2390  
 Ariza, E. Hentschel 1458  
 Arkell, N. J. 1341  
 Arlian, L. G. 1980  
 Armas, L. F. de 308, 745, 3432  
 Arnaud, A. 520  
 Arnold, E. V. 2554  
 Arnold, J. 126  
 Arnold, J. T. A. 2202  
 Arsen'eva, L. P. 695  
 Arteaga, I. de Haro 352  
 Artem'ev, M. M. 869, 1758  
 Arthur, D. R. 249  
 Arumova, E. A. 2731  
 Arutyunov, L. I. 1013  
 Asakura, K. 857  
 Ascher, K. R. S. 1892  
 Ash, N. 1730  
 Ashburner, A. 1995  
 Ashley, T. R. 930  
 Aslamkhan, M. 3259  
 Asman, S. M. 2100, 2101, 3140, 3239, 3240  
 Assem, J. van den 2461  
 Association for the Study of Oriental Insects 14  
 Atal, C. K. 1755  
 Atalay, R. 3369  
 Ataur-Rahim, M. 2642  
 Atkins, K. D. 176, 2718  
 Atkins, M. D. 535  
 Atlan, H. 219  
 Atmosoedjono, S. 1776, 1777  
 Atrous, L. El 2256  
 Attakorn, N. 724  
 Attri, B. S. 3216  
 Atwood, J. D. 1627  
 Aubin, A. 2958  
 Ault, S. K. 266, 267  
 Auregan, G. 644  
 Australia, Commonwealth Scientific and Industrial Research Organization 18, 19, 779, 2831, 2832  
 Australia, Waite Agricultural Research Institute 3037  
 Autrum, H. 2004  
 Avetisyan, G. A. 355, 2579  
 Avigad, L. S. 231  
 Ávila, I. García 849  
 Awadallah, K. T. 3344, 3345  
 Awe, W. 2191  
 Axtell, R. C. 226, 374, 1345, 1814, 2723  
 Ayers, G. S. 2273  
 Azad, A. Farhang- 2321  
 Azanjac, R. 3109  
 Azeez, S. A. 2888  
 Azevedo, E. M. V. Milward-de- 1747  
 Azra, K. 1557, 2938  
 Babcock, J. L. 2498  
 Babin, L. 1798  
 Babu, C. S. 101  
 Babu, K. S. 1164, 1169, 2784  
 Baccam, D. 57  
 Bachrach, U. 1402  
 Badie, A. 2727  
 Baessa Aguiar, O. 1678  
 Baez, M. 2071  
 Bagirov, G. A. 852  
 Bahadur, J. 2840  
 Bai, G. 1357  
 Bai, M. G. 2621  
 Bailey, C. L. 3248  
 Bailey, D. L. 80, 846, 1815, 1816, 2125, 2272, 3232, 3236, 3243  
 Bailey, R. E. 3405  
 Baillie, A. C. 2507  
 Baillie, B. G. 178  
 Bailly-Choumara, H. 2674, 3183, 3304, 3403  
 Bailly, M. 133, 134  
 Baimai, V. 620  
 Bain, O. 58, 128, 692, 1573  
 Baïramov, M. 1013  
 Bakanov, Sh. A. 3349  
 Baker, J. A. F. 939  
 Baker, J. D. 2110  
 Baker, J. R. 952  
 Baker, L. F. 2726  
 Baker, R. 2829  
 Baker, R. H. 119, 372, 595, 1557, 2377, 2938  
 Baki, M. H. A. 3293  
 Bakkal, S. N. 2708  
 Baktinova, N. Z. 1043  
 Bala, N. 3020  
 Balaraman, K. 2622, 2641  
 Balashov, Yu. S. 305, 719, 1022, 3431  
 Balderrama, N. 797  
 Baldry, D. A. T. 1096, 1859, 1873, 1875, 2401, 2982  
 Baldwin, K. F. 1193  
 Balk, F. 3323  
 Balling, S. S. 1782  
 Balmes G., L. 1131  
 Balusek, J. 1639  
 Banerjee, D. P. 1260, 2837  
 Banerjee, K. 573  
 Bang, Y. H. 591, 1194, 1230, 2895, 2918, 2919, 3188  
 Banks, C. S. 2818  
 Banks, W. A. 1627, 2725  
 Bannister, A. 775  
 Bänziger, H. 916  
 Baqar, S. 3233  
 Baquer, N. Z. 552  
 Bar, M. E. 400  
 Bar-Zeev, M. 39  
 Baral, K. 2505  
 Baranovskii, P. M. 493, 2692  
 Baransu, O. 519  
 Barata, J. M. S. 2575  
 Baratov, Sh. B. 154, 205, 676, 1616, 1617, 3347  
 Barbier, D. 517  
 Barca, I. Hollands 738  
 Barclay, H. J. 1429  
 Baréty, M. 1967  
 Barfred, T. 690  
 Barhmanad Rao, B. 1447  
 Barjac, H. de 1207, 1798, 2350, 2606  
 Barker, D. M. 1644  
 Barker, J. F. 3170  
 Barker, R. W. 604, 979  
 Barkovich, E. N. 411  
 Barlin, M. R. 3159  
 Barlow, L. A. 1915  
 Barnard, B. J. H. 2139  
 Barnard, D. R. 1575, 2388  
 Barnard, R. H. 2384  
 Barnby, M. A. 2114  
 Barnes, A. M. 3405, 3406  
 Baron, R. L. 3135  
 Barrabes, A. 697  
 Barre, N. 958  
 Barrera, A. 1130  
 Barrera, R., R. 2362, 2643  
 Barrett, F. M. 2189, 2860  
 Barrett, R. E. 1187  
 Barrett, T. V. 42, 3167  
 Barrio, A. 3115  
 Barro, T. 2672  
 Barry, C. 1524  
 Barry, J. D. 1878

- Bart, A. G. 1339  
 Bartell, D. P. 2730  
 Barth, D. 346  
 Barth, R. 2284, 2297, 2298  
 Bartkowska, K. 51  
 Bartlett, C. M. 2651  
 Barton Browne, L. 166, 2702  
 Basaca-Sevilla, V. 83, 3221  
 Bascur, L. 523  
 Bassal, T. T. M. 2753, 2754, 3414  
 Bassinga, A. 2686, 2687  
 Bassols Batalla, I. 1462  
 Bast, T. F. 3246  
 Basu, A. 2837  
 Batalla, I. Bassols 1462  
 Bateman, P. 331  
 Bateman, P. L. G. 7  
 Batey, R. G. 3104  
 Batista, H. A. M. 2250  
 Batra, S. W. T. 1631  
 Bauer, A. C. 1916  
 Bauer, B. 1093  
 Baumgartner, H. 1089  
 Bautz, A. M. 882  
 Baxter, R. C. 219  
 Bay, D. E. 1607, 2432, 2827  
 Bayer, E. V. 2081  
 Bazalar, H. 2466  
 Bazlikova, M. 271  
 Bázliková, M. 3399  
 Beacham, T. D. 1340  
 Beadle, D. J. 1944  
 Beadles, M. L. 441  
 Beament, J. 2953  
 Beattie, G. A. C. 1609  
 Beaty, B. J. 831, 2630  
 Beaucornu, J. C. 2233  
 Beaucornu-Saguez, F. 2674  
 Beaucourmu, J. C. 49, 2335, 3181, 3183  
 Beck, B. E. 1290  
 Beckemeyer, E. F. 408  
 Beckwith, M. L. 2498  
 Bee, L. H. 2170  
 Beegle, C. C. 197, 2501  
 Beerwinkle, K. R. 2426, 2765  
 Begemann, G. J. 2979  
 Begon, M. 531  
 Beheri, A. El- 2776  
 Behl, S. M. 3093  
 Bei-Bienko, G. Ya. 2823  
 Beidas, M. F. 613  
 Beirne, B. P. 1243  
 Belgium, Centre de Recherches Agronomiques de l'État 2762  
 Belkin, J. D. 2946  
 Belkin, J. N. 583, 614, 2903  
 Bell, L. J. 1940  
 Bell, W. J. 26, 789, 2557  
 Belle, E. A. 845  
 Bellec, C. 145, 2676, 2677, 2975  
 Belmonte, A. 368, 2052  
 Beltaos, S. 1272, 1277, 1278  
 Belton, P. 2619, 2927  
 Belyaev, V. I. 2973  
 Belyaeva, A. P. 253  
 Bemrick, W. J. 600  
 Ben-Eliahu, M. N. 874, 1087, 3324, 3325  
 Ben-Horin, A. 1981  
 Ben-Joseph, M. 1402  
 Ben-Tamar, D. 1087  
 Ben-Zakour, L. 2255  
 Benach, J. L. 278, 3246  
 Benner, D. B. 2722  
 Bennett, G. F. 2045  
 Bennett, G. W. 2841  
 Bennett, L. N. 2558  
 Bennett, S. G. 982  
 Bennetova, B. 3361  
 Bentley, P. D. 1439  
 Benton, A. H. 1514, 2339, 2867, 3378  
 Beraldo, W. T. 2780  
 Berardi, V. P. 3182  
 Berdyev, A. 1636, 2747  
 Berdyev, B. 1521  
 Berdyev, B. 1023  
 Beresford-Jones, W. P. 2872  
 Berg, W. 757  
 Berger, A. 2922  
 Bergoch, D. 2040  
 Berl, D. 429  
 Berlin, J. 3246  
 Berlin, O. G. W. 2903  
 Berman, W. 290  
 Bernard, G. Vattier- 136  
 Bernard, J. 1735  
 Bernardini Mosconi, P. 1484  
 Bernardini, P. Mosconi 786  
 Bernardo, M. J. 1851, 1852, 2981  
 Bernath, R. F. 2582  
 Berndt, K. P. 913  
 Bernheimer, A. W. 231  
 Bernon, G. 3380  
 Berre, R. le 1702  
 Berrens, L. 923  
 Berridge, M. J. 1159  
 Berry, J. G. 3012  
 Berry, W. J. 2902  
 Berti, E. 566  
 Beskina, S. R. 2745  
 Bessot, J. C. 1654, 1955  
 Betancourt E., A. 700, 2218  
 Betancourt, P. 37  
 Betke, P. 3350, 3351  
 Bettag, E. 1530  
 Bettany, B. W. 2401  
 Beveridge, I. 692  
 Bezant, E. T. 1139  
 Bezuidenhout, J. D. 945, 1643  
 Bharati, V. S. 3273  
 Bhaskaran, G. 2834  
 Bhat, H. R. 2697  
 Bhatia, S. S. 2288  
 Bhatnagar, P. 1165  
 Bhatnagar, P. K. 2837  
 Bhatnagar, V. N. 608  
 Bhodigen, S. Ehlers- 2815  
 Bianco, A. E. 585  
 Bibikova, V. A. 2318  
 Bic, G. 758  
 Bickley, W. E. 2073  
 Bida, S. A. 521  
 Bienko, G. Ya. Bei- 2823  
 Bigalke, R. D. 935, 2224  
 Biggar, R. J. 1375  
 Bigot, L. 3386  
 Bilbie, I. 1788, 2039  
 Bills, G. T. 467  
 Billstein, S. 1498  
 Bilqees, F. M. 731  
 Bily, S. 689  
 Binnington, K. C. 263, 953, 3407  
 Birkenbeil, H. 2847  
 Biscoe, M. Tyndale- 2728  
 Bishara, S. I. 3374  
 Bishop, D. H. L. 1950, 2630  
 Bishop, P. M. 2725  
 Bisoyi, S. 664  
 Bissig, P. 1438  
 Biswas, S. 1629, 2059, 2724, 2889  
 Bjostad, L. B. 1686  
 Black, R. R. 696  
 Blackburn, N. K. 1942  
 Blackman, R. L. 1995  
 Blair, H. A. 219  
 Blaney, W. M. 1685  
 Blanton, F. S. 131  
 Blatger, J. Suzzoni- 652  
 Block, G. D. 1162  
 Blommers, L. 345, 1178  
 Blomquist, G. J. 2706  
 Blondeau, J. 3045, 3046  
 Blue, W. E. 2040  
 Blum, M. S. 2205  
 Blume, R. R. 2425  
 Blythe, S. P. 669  
 Boarer, C. D. H. 2215  
 Bocharova, M. M. 1068  
 Bock, M. E. 2165  
 Bock, R. 3125  
 Boctor, F. N. 1400  
 Boddy, W. O. 1147  
 Bodenstein, D. 3354  
 Bogdanov, I. I. 2871  
 Bohart, R. M. 2073  
 Böhm, G. A. 787  
 Bohnsack, K. K. 930  
 Boike, A. H., Jr. 371  
 Boiko, V. I. 1339  
 Bokštefn, F. M. 2145  
 Boldarueva, L. V. 423, 1067  
 Bolen, E. G. 629  
 Bolin, R. A. 3406  
 Bolotin, E. I. 2734  
 Bolton, H. T. 1898  
 Bondarchuk, A. S. 1032  
 Bondareva, N. I. 1758, 2596  
 Bôngrand, P. 520  
 Boo, K. S. 1200, 1201, 2153  
 Boo Liat, Lim 817  
 Boobar, L. R. 1848  
 Boon von Ochsee, G. A. 2982  
 Boonstra, R. 1340  
 Boorman, J. 138, 627, 630, 635  
 Booth, K. S. 1393  
 Borba, A. M. 1202, 1203, 1204  
 Borchel, U. Scheefers- 1838  
 Borčić, B. 237  
 Borda P., M. R. 1474  
 Borden, J. H. 2618  
 Boreiko, T. A. 1056  
 Borgia, G. 2454, 2709  
 Borglund, E. 292, 1673  
 Borisova, V. I. 1675  
 Borkent, A. 2427, 2931, 3309  
 Bořkovec, A. B. 1368  
 Bornstein, S. 1656  
 Borovsky, D. 91, 2613, 3268  
 Bosch, R. van den 1432  
 Boshko, G. V. 1024  
 Bosler, E. M. 3246  
 Bosman, B. T. 1135  
 Boston, M. D. 65  
 Boszko G., J. 2577  
 Bot, J. 1984  
 Botelho, J. R. 1751, 2491  
 Botev, B. A. 157  
 Botham, R. P. 1944  
 Bottrell, D. R. 2833  
 Botzler, R. G. 1650  
 Bouare, S. 2996  
 Bouček, Z. 3056  
 Bouchalová, J. 1648  
 Bouchite, B. 1700  
 Bouffet, P. 1300  
 Boulard, C. 877, 1889  
 Boulard, Y. 57  
 Boulton, R. W. 582  
 Bourassa, J. P. 672  
 Bourdoiseau, G. 873, 1088, 1884, 2686, 2687  
 Bourgeois, F. 1440  
 Bourgouin, C. 2606  
 Bourgouin, E. 1207  
 Bourne, A. S. 3072  
 Bousquet, J. 1964  
 Boutin, C. 520  
 Boutonnier, A. 833  
 Bowdan, E. 3047  
 Bowen, E. T. W. 2037  
 Bowen, G. S. 1749, 2629, 3405, 3406  
 Bower, S. M. 2863  
 Bowers, W. S. 350  
 Bown, D. N. 591, 1194, 1230, 2895, 2918, 2919  
 Bowser, P. R. 2097  
 Boyer, J. 1419  
 Boyes, D. 3228  
 Boyett, J. M. 2046  
 Bozeman, F. M. 3066  
 Bozhilova, R. I. 901  
 Bracke, J. W. 29  
 Bradley, R. E. 2028  
 Bradoo, B. L. 793  
 Bradshaw, W. E. 61, 66, 839  
 Brady, J. 20, 148, 1685  
 Brantley, S. G. 1732  
 Bratt, A. D. 677  
 Braun, M., III 1672  
 Braun, V. A. 1  
 Bray, R. S. 1298, 1299  
 Breaud, T. P. 2937  
 Breed, M. 1488  
 Breed, M. D. 27, 1741  
 Breeland, S. G. 110  
 Breev, K. A. 1339, 1594, 2690  
 Brenner, Z. 36, 1504  
 Brenes Madrigal, R. 2138  
 Brengues, J. 1708, 1714  
 Brennan, J. M. 3095  
 Brenner, R. J. 431, 1851, 1855, 2981  
 Bres, P. 1826  
 Brethour, J. R. 2422  
 Brezina, R. 924, 1647  
 Brideoake, B. R. 163  
 Bridges, R. G. 2172  
 Briegel, H. 1564, 2076  
 Briers, T. 2173, 3360  
 Brieze-Stegeman, R. 533, 1720  
 Briggs, A. R. Mead- 2324  
 Bright Singh, P. 3276  
 Brinck-Lindroth, G. 2340  
 Brinck, P. 2338  
 British Crop Protection Council 755  
 British Pest Control Association 1138  
 Broadhead, E. C. 1602  
 Broce, A. B. 1132, 1896  
 Brockis, D. C. 2242  
 Brocklesby, D. W. 936, 940, 946  
 Brokken, E. S. 346  
 Bronswijk, J. E. M. H. van 734, 2751, 3094  
 Brooke, J. P. 2292  
 Brooks, W. M. 1539  
 Brossard, M. 2220  
 Brossur, R. 337  
 Brothers, W. 48  
 Brown, A. W. A. 1803  
 Brown, B. E. 1487  
 Brown, D. D. 3123  
 Brown, D. L. 2028  
 Brown, D. T. 1838  
 Brown, H. E. 1133, 2169  
 Brown, H. M. 1348  
 Brown, J. 904  
 Brown, K. R. 1352  
 Brown, M. A. 3435  
 Brown, P. M. 3009  
 Brown, R. E. 1387  
 Brown, R. P. 2159, 2160  
 Brown, S. J. 252, 710  
 Browne, J. E. 2141  
 Browne, L. B. 166, 2702  
 Bruaire, M. 3198  
 Bruce-Chwatt, L. J. 2380  
 Bruce, W. A. 3384  
 Brummer-Korvenkontio, M. 702  
 Brun, L. 3068  
 Brune, H. 1623  
 Brust, R. A. 622, 1809, 3311  
 Bryan, J. 2038  
 Bryan, J. H. 612  
 Bryant, E. H. 3019  
 Bryce, I. J. Graham- 2503  
 Bryginskii, S. A. 2590  
 Bucci, A. 764  
 Buchan, P. B. 2798  
 Buchatskii, L. P. 1025, 3192  
 Buckholz, R. H. 2423  
 Budelmann, K. 3395  
 Buei, K. 464, 3286  
 Bueno, M. L. 432  
 Bühlmann, V. 999  
 Bull, C. M. 963, 1951, 3401  
 Bull, M. J. 1444  
 Bulla, L. A. 2643  
 Bulla, L. A., Jr. 118  
 Bullini, L. 70, 72, 73, 822  
 Bunnag, T. 82  
 Burakova, O. V. 1376  
 Buralli, G. M. 195  
 Burgdorfer, W. 234, 966, 967, 2741  
 Burger, J. F. 1922, 2416  
 Burgess, N. R. H. 1141, 3338  
 Buriro, S. N. 247  
 Burkholder, J. E. 349  
 Burnett Smith, E. 2006  
 Burns, B. R. 268  
 Burns, E. C. 2209  
 Burr, M. L. 1975  
 Bursell, E. 1094, 2682  
 Burton, J. J. S. 625, 2808  
 Burton, S. 1608  
 Büscher, G. 1469



- Buschman, L. 455, 904  
 Bushrod, F. M. 1836  
 Busse, W. W. 2455  
 Bussieras, J. 223, 1665  
 Busvine, J. R. 322, 1204, 2314  
 Buteiko, T. P. 2793  
 Butenko, A. M. 251  
 Butler, J. F. 1459, 1898  
 Butler, L. 1805  
 Butt, M. Z. 3356  
 Butterfield, J. 2456  
 Büttiker, W. 564, 2526, 2530, 2533, 2535, 2536, 2537  
 Buyakova, T. G. 1032  
 Bygrave, A. C. 2759  
 Cabanac, M. 3116  
 Cabot, M. C. 3027  
 Cabrera P., F. A. 3149  
 Caceres, I. 921  
 Cagnard, V. J. M. 1826  
 Cais, L. 557  
 Calábria, P. V. 2072  
 Calder, L. 1275  
 Calderón Aragón, L. del C. 1460  
 Calderón, L. del C. 1126  
 Calero, R. 1117  
 Calheiros, L. B. 870  
 Calisher, C. H. 1749, 2219, 2629, 2949, 3149, 3405, 3406  
 Callan, E. McC. 2716  
 Callec, J. J. 2559  
 Callinan, A. P. L. 2015, 2698  
 Callot, J. 414, 2052  
 Callow, L. L. 714, 947  
 Calvo, M. A. 1637  
 Camacho-Martínez, F. 726  
 Cambefort, Y. 917  
 Cameron, A. L. 65, 1762  
 Camhi, J. M. 3162  
 Camicas, J. L. 704, 1411, 1945, 2637  
 Camin, J. H. 492  
 Camino Lavin, M. 1124, 1129, 1459, 1461  
 Camoens, J. K. 2538  
 Campan, M. 2717  
 Campbell, A. 240  
 Campbell, C. C. 618, 2151  
 Campbell, J. B. 1179  
 Campbell, J. D. 2910  
 Campbell, R. S. F. 961  
 Campion, D. G. 1716  
 Campos Pereira, M. de 2476  
 Canada Agriculture, Research Branch 2510  
 Canales Yáñez, I. E. 1125  
 Cañamares, F. T. 2941  
 Cancrini, G. 73  
 Candido, A. Ocampo 1463  
 Candido, L. M. B. 330  
 Canese, A. 3174  
 Canestri-Trotti, G. 12  
 Čanković, M. 688  
 Canonica, G. W. 989, 990  
 Cao, Y. C. 2649  
 Capapé, C. 2251  
 Capela, R. A. 1239, 1240, 1532  
 Capotosto, P. 3228  
 Capri, J. J. 321, 357  
 Car, M. 3316  
 Carcavallo, R. U. 37, 38  
 Carcavallo, R. V. 1123  
 Cardinal, H. 69  
 Carey, A. B. 248, 1403, 1408, 2025  
 Carey, M. G. 2025  
 Carley, J. G. 862, 1253, 1840  
 Carlson, D. A. 64, 648, 649, 762, 1763, 1898, 2272, 2679, 3371  
 Carlson, M. K. 1802  
 Carlson, R. B. 474  
 Carme, B. 861  
 Carne, P. B. 1454  
 Carner, G. R. 1687  
 Carneri, I. 2014  
 Carneri, I. de 566  
 Carnevale, P. 1310, 3195  
 Carney, R. L. 1442  
 Caron, D. M. 2457  
 Carpenter, S. J. 2073  
 Carpenter, T. L. 2367  
 Carrasquero, B. 37  
 Carriere, B. 1918, 1919, 1932  
 Carrillo, J. M. 3393  
 Carrillo Liz, A. 1126  
 Carriou, M. L. 140  
 Carter, J. G. T. 2393  
 Carter, J. H. 383, 3279  
 Carter, S. W. 1143  
 Casabe, N. 1745  
 Casabé, N. 3169  
 Casaglia, O. 764  
 Casals, J. 1637, 1641, 2758  
 Casarrubias, P. J. 1464  
 Casida, J. E. 1445, 3435  
 Casper, E. A. 3065  
 Cassani, J. R. 1807  
 Cassiagne, R. 3198  
 Castillo, C. 561  
 Castillo, J. M. 2517  
 Castro, D. del C. 1475  
 Castro Filho, J. de 811  
 Castro Gomes, A. de 2970  
 Castro, J. F. de 2781  
 Cattell, K. J. 2194  
 Caughley, F. 3146  
 Cavallini, C. 10  
 Cavanaugh, D. C. 1185, 2317  
 Cavey, W. A. 169  
 Cawthorne, J. H. 3302  
 Cech, J. J., Jr. 2090, 2091, 2092  
 Cedano, M. Velasco 352  
 Cenesizoglu, E. 519  
 Centre de Recherches Agronomiques de l'État, Belgium 2762  
 Centre de Recherches sur les Trypanosomoses Animales, Upper Volta 3004  
 Cerf, D. C. 1442  
 Černý, V. 238, 239, 362, 924, 1646  
 Cerqueira, E. 2072  
 Cerqueira, E. J. Lima 3185  
 Cesaroni, F. 657  
 Chabaud, A. G. 57, 692  
 Chabaud, M. 2252  
 Chadwick, D. P. 3066  
 Chadwick, P. R. 1144  
 Chagas, C. 1504  
 Chaika, S. Yu. 45, 358, 1505, 3132  
 Chaker, E. 1251, 3304  
 Chakrabarti, A. 3417  
 Chakrabarti, K. 3417  
 Chakraborty, M. S. 2620  
 Chakraborty, S. K. 2620  
 Chakravarty, A. K. 1266  
 Chakraverty, R. K. 608  
 Chakravorty, B. C. 2888  
 Challier, A. 435, 1095, 1326, 1696, 1698, 1872, 3002  
 Chalmers, K. 2290, 2291  
 Cham, K. 2037  
 Chamberlain, W. F. 30, 671  
 Chambers, J. E. 3129  
 Chambers, M. D. 3278  
 Chan, K. L. 625, 1657, 3274  
 Chanas, A. C. 1641  
 Chandelier, E. L. 330  
 Chandler, F. W. 2219  
 Chandra, R. 2374, 3294  
 Chandras, R. K. 2373, 2640  
 Chandrasekharan, A. 2057, 3223  
 Chandrashekara, I. 2470  
 Chang, C. K. 546  
 Chang, F. B. 1188  
 Chang Moh Seng 413  
 Chang, S. C. 1368  
 Chang, W. F. 2864  
 Chang, Z. G. 868  
 Channabasavanna, G. P. 923  
 Chapman, H. C. 377, 1197, 2258  
 Chapman, M. D. 739, 2489, 2492  
 Chapman, N. G. 647  
 Chapman, R. B. 2274  
 Charleston, W. A. G. 1172, 2290, 2291  
 Charlwood, J. D. 1269, 1766, 1769, 1793, 1823, 1908, 2187, 2383, 2874  
 Charnetski, W. A. 1271, 1272, 1273, 1274, 1275, 1276, 1278, 1280, 1282, 1291  
 Charpin, J. 520  
 Charyev, Sh. 3332  
 Chastel, C. 1947, 2213, 2233  
 Chatelain, J. 3392  
 Chatterjee, A. 2792, 3417  
 Chatterjee, N. B. 339  
 Chaudhry, H. S. 1355  
 Chaudhry, M. 595  
 Chaudhry, S. 1558  
 Chaudhuri, P. 23, 1681  
 Chaudhuri, M. F. B. 1859, 2998  
 Chauvet, G. 1706  
 Chavan, S. R. 1561  
 Cheetham, R. 1439  
 Cheke, R. A. 641  
 Chel'evski, S. 2542  
 Chelliah, R. V. 1205, 1206, 1795  
 Chemical Society 1433  
 Chemodanova, L. E. 1415  
 Chen, A. C. 1901, 3032  
 Chen, C. C. 2349  
 Chen, D. X. 294  
 Chen, H. B. 2053  
 Chen, J. Y. 2649  
 Chen, N. Q. 1827  
 Chen, P. S. 2075  
 Chen, R. H. 293  
 Chen, S. B. 1003, 2760, 3098  
 Chen, W. M. 2604  
 Chen, X. B. 2894  
 Chen, X. P. 997  
 Chen, Y. Y. 124  
 Cheng, M. L. 369, 2035  
 Cheong, W. H. 625, 1245, 1774, 2885, 3274  
 Chermette, R. 1665  
 Chernysh, S. I. 667  
 Cheronogrodzky, J. W. 1680  
 Chetwyn, K. N. 3338  
 Chevallier, C. 1709  
 Chew, V. 1245  
 Chhabra, M. B. 32  
 Chiang, G. L. 3274  
 Chiarini, C. 806  
 Chiba, T. 470  
 Chintawi, M. 651, 3076, 3326  
 Chin, T. H. 558, 2855  
 Chin, W. 618  
 Ching Lien, J. 847  
 Chinn, H. R. 1442  
 Chirov, P. A. 1033  
 Chizzonite, J. J. 373  
 Chlebowsky, H. O. 409, 1794  
 Chmela, J. 1639  
 Cho, H. W. 1727, 1729  
 Choon Fah, Liaw 598  
 Choumara, H. Bailly- 2674, 3183, 3304, 3403  
 Chow, Y. S. 926, 3161  
 Chrin, L. R. 838  
 Christensen, H. A. 2150, 2576  
 Christin, J. G. 2743  
 Chrom, V. H. 155  
 Chubareva, L. A. 1579  
 Chumakova, I. V. 2868  
 Chumbley, L. C. 2534  
 Chunikhin, S. P. 89, 716, 1036, 2732, 2733  
 Chwatt, L. J. Bruce- 2380  
 Ciampor, F. 932  
 Cianchi, R. 72, 73  
 Cicchetti, R. 774, 1571  
 Cicolani, B. 660  
 Cilara, A. 519  
 Cilek, J. 2929  
 Clair, M. 873, 1088, 1323, 1324, 1699  
 Claquin, P. 1562  
 Clardy, J. 2554  
 Clare, F. B. 3402  
 Clarke, J. L., III 1810  
 Clarke, L. 148  
 Claustre, J. 422, 2358  
 Clay, T. 2565  
 Clemence, P. 1942  
 Clerc, Y. 2389  
 Clerx, J. P. M. 1950  
 Cliff, B. 1704  
 Clifford, C. M. 275, 1949  
 Clifford, D. J. 1298, 1299, 1305  
 Cloudsley-Thompson, J. L. 1723  
 Coackley, W. 2142  
 Coates, D. 3272  
 Coates, T. A. Redding- 3272  
 Coates, T. W. 648, 762  
 Coats, J. R. 3123  
 Cobb, P. E. 1089  
 Cockbill, G. F. 436  
 Cockings, K. L. 1316  
 Coetzee, M. 2946  
 Cogley, T. P. 3333  
 Cohen, C. F. 1453  
 Cohen, E. 3262  
 Cohen, M. J. 2008  
 Cohen, S. R. 1965  
 Coignoul, F. 1413  
 Coillot, J. P. 1735  
 Colbo, M. H. 643, 1854, 2974, 3313  
 Colella, G. 764  
 Coleman, R. B. 796  
 Coles, C. W. 2  
 Colina, G. Otero 1462  
 Collado, J. Gil 243  
 Collatz, K. G. 3026  
 Collett, G. C. 381, 3201  
 Colli, C. Wisnevesky- 1506  
 Collins, F. H. 2115  
 Collins, R. C. 2151  
 Collins, W. E. 576, 618, 834, 843, 2896  
 Collins, W. J. 749  
 Colln, K. 2448  
 Colombatti, M. 990  
 Coluzzi, A. 2128  
 Coluzzi, M. 70, 72, 765, 766, 767, 770, 822  
 Colwell, A. E. 2109, 2385, 2414, 2415, 3013  
 Combescot, C. 697  
 Commission of the European Communities 1990, 1991, 1992, 1993, 1994  
 Commonwealth Mycological Institute 62  
 Commonwealth Scientific and Industrial Research Organization, Australia 18, 19, 779, 2831  
 Compton, J. 2092  
 Conceição, E. L. 1524  
 Conconi, J. Ramos Elorduy de 1466  
 Condy, J. B. 1942  
 Connors, T. A. 1452  
 Conrat, H. Fraenkel- 525  
 Conroy, J. A. 2248  
 Consolim, J. 1202, 1203, 1204  
 Constantinou, C. 315  
 Contacos, P. G. 576, 834  
 Contoreggi, C. 1608  
 Contreras, N. Hernández 3432  
 Conway, G. 3146  
 Cook, B. J. 3341  
 Cook, I. M. 1903, 3033  
 Cook, R. W. 3105  
 Cooney, J. C. 966  
 Coons, L. B. 304  
 Cooper, J. F. 2486  
 Coosemans, M. H. 1708  
 Coppage, D. L. 452  
 Coppedge, J. R. 457, 1132, 1133, 2169, 2429, 2434  
 Corbet, S. A. 2953  
 Corey, M. E. 1528  
 Corley, C. 2428  
 Corliss, J. O. 429  
 Corneau, B. 140  
 Corner, L. C. 104  
 Cornet, J. P. 1411  
 Cornet, M. 1244, 2628  
 Cornillon, J. 1419  
 Cornish, R. A. 1509  
 Cornwell, P. B. 3157  
 Corona, J. de León 1128  
 Corredor, A. 638

- Corrier, D. E. 236  
Cory, J. 3081  
Coscarón, S. 463, 1476, 1846  
Cosmao Dumanoir, V. 2350  
Costa, J. A. Rosas 1149  
Costa, N. A. da 2250  
Costello, R. A. 397  
Cotterell, G. S. 1927  
Cotterman, S. G. 371  
Couch, T. L. 1535  
Coulanges, P. 2389  
Coulet, M. 1669  
Coulson, J. C. 2456  
Couprie, B. 1798  
Courret, D. 435, 1697, 2986, 2987, 2988, 2989, 2990, 2991, 2992, 2993  
Cousserans, J. 1709  
Cova Garcia, P. 579  
Covisa Villa, A. 129  
Coy, J. R. 177, 193  
Coz, J. 310, 1707, 1708  
Crabbe, J. R. 2937  
Craig, D. A. 2667, 3309  
Craig, G. B., Jr. 577, 2901, 2902  
Crandall, T. A. 2097  
Crane, G. T. 2949  
Crans, W. 2996  
Crans, W. J. 3292  
Cranston, P. S. 2531  
Craven, R. B. 2037  
Crawford, L. D. 1454  
Crespo, O. 1710, 1711, 3298  
Crippen, P. H. 2037  
Cristakou, H. D. 1768  
Cristescu, A. 1184  
Croft, S. L. 2866, 2873  
Crombie, L. 1434  
Crompton, G. W. 3035  
Cromroy, H. L. 1091  
Crookshank, H. R. 2486  
Croome, G. C. R. 1270  
Cropp, C. B. 563, 1749  
Croset, H. 633  
Cross, J. H. 83, 2032, 3221  
Crosskey, R. W. 1846, 2670, 2671, 3315  
Croydon, J. 2168  
Cruden, D. L. 29, 1161  
Cruz, D. 1935  
Cruz, J. de la 308, 1952  
Cruz, W. J. 3258  
Cuevas, L. 3149  
Cuff, W. R. 1369  
Cuisine, D. 873, 1088, 1323, 1324, 1699, 1875, 1884, 2684  
Cummins, L. H. 2459  
Cunha Ramos, H. da 2069, 2638  
Cunningham, I. 875, 2162  
Cuny, R. 683  
Cupp, E. W. 431, 1851, 1852, 1855, 2666, 2981  
Curd, J. Lucientes- 3419  
Curran, C. H. 2587  
Currie, R. A. 1274, 1275  
Curry, J. P. 324  
Curtis, C. F. 616, 825, 1100, 1795, 2048, 2366, 2370, 2405, 2928  
Cuy, L. S. 3416  
Cybinski, D. H. 862, 1253, 3303  
Cyprieh, D. 3087  
Cyprus, Ministry of Health 370, 3267  
Czechowski, W. 229  
Czczuga, B. 800  
Da Costa, N. A. 2250  
Da Cunha Ramos, H. 2069, 2638  
Da Rocha e Silva, E. O. 812, 3173  
Da Rosa, A. P. A. Travassos 2627, 2655, 2656, 3224  
Da Rosa, J. F. S. Travassos 2655, 3224  
Da Rosa, J. F. Travassos 2656  
Da S. Guedes, A. 2049  
Da Silva, G. Rodrigues 3172  
Da Silva Mattos, S. 2049, 2072  
Da Silva Passos, G. A., Jr. 2857  
Dadd, R. H. 1238, 2608, 3214  
Daddow, K. N. 2129  
Dahlman, D. L. 2441, 2789  
Dailey, M. D. 2228, 2229  
Dale, P. S. 2516  
Dalgaro, L. 582  
Dalglish, R. J. 1938, 3088  
Dallwitz, M. J. 928  
Dalton, T. 3029  
D'Amato, L. A. 2441  
Dame, D. A. 65, 846, 1089, 1762, 1816, 3226, 3236, 3243  
Dandawate, C. N. 3276  
Dang, K. 967  
Dang, P. T. 143, 1533  
Daniel, M. 238, 239, 362, 924, 930, 1646  
Daniel, V. Py- 1846, 2155  
Danilov, V. N. 77, 410, 1548  
Danilović, V. 3109  
Danish Pest Infestation Laboratory 1479  
Danner, G. 802  
Dario, J. G. 2818  
Darji, N. 149, 1085, 1312  
Darsie, R. F., Jr. 3237  
Darwazeh, H. A. 78, 2084, 2106, 2107  
Das, A. B. 1490  
Das, B. K. 23, 1681  
Das, M. 2057, 2599  
Das, P. K. 2373, 2623, 2640, 3218, 3269  
Das, S. 1845  
Dascal, N. 483  
Dashkova, N. P. 405  
Datta, A. 3223  
Datta, K. K. 2599  
Datta, S. 553, 2505  
Dauterman, W. C. 206, 1606  
Davey, K. G. 2858, 2859, 3170, 3175  
Davey, R. B. 256, 494, 975, 1935, 2739, 3071  
Davidson, E. W. 2258  
Davidson, G. 616, 2382  
Davidson, L. I. 118  
Davidson, W. R. 1679  
Davies, D. M. 2153  
Davies, F. G. 1551  
Davies, I. 158  
Davies, J. B. 1704, 1705, 2672  
Davies, J. H. 1444  
Dávila, O. 1465  
Davis, E. E. 976  
Davletklychev, A. A. 1521  
Davydova, E. D. 2289  
Dawson, J. 3034  
Day, J. F. 1514, 2339  
Daynes, P. 3061, 3068  
De Alzueta, A. B. 984  
De Armas, L. F. 308, 745, 3432  
De-Azevedo, E. M. V. Milward- 1747  
De Barjac, H. 1207, 1798, 2350, 2606  
De Campos Pereira, M. 2476  
De Carneri, I. 566  
De Castro Filho, J. 811  
De Castro Gomes, A. 2970  
De Castro, J. F. 2781  
De Conconi, J. Ramos Elorduy 1466  
De Deffis, M. 351  
De Dulanto, F. 726  
De Freitas, E. N. 3224  
De Haro Arteaga, I. 352  
De Hoyos, P. M. 432, 638, 2156  
De Kort, C. A. D. 3134  
De la Cruz, J. 308, 1952  
De la Iglesia, F. A. 804  
De la Serna de Esteban, C. J. 524  
De la Torre, F. A. 1125  
De Lello, E. 1588, 1589, 3334  
De León Corona, J. 1128  
De Licastro, S. 35  
De Licastro, S. A. 1745  
De Lima, C. P. F. 1107  
De Lomas, J. Garcia 3308  
De Loof, A. 2173, 2701, 3360  
De Lucca, F. L. 2857  
De Man, W. 3360  
De March, B. G. E. 1279, 1281  
De Meillon, B. 1248  
De, N. 1845  
De Oliveira Filho, A. M. 350, 560, 807, 1746  
De Oliveira Filho, A. M. de 1507  
De Oliveira, J. L. 1747  
De Oliveira, T. S. 3167  
De Paoli, C. 10  
De Raadt, P. 1311  
De Santis, L. 555  
De Souza Lopes, O. 2949  
De Souza, M. C. M. 1259  
De Ugueto, C. Escalante 579  
De Vasquez, A. M. 2576  
De Villar, M. I. P. 35, 1745  
De Vos, A. J. 948  
De Wolf, A. 1593  
De Zulueta, J. 617  
Dean, B. V. 1975  
Dearn, J. M. 2199  
Deb-Kirtaniya, S. 2792  
Deco, M. A. di 765, 766, 770  
Detet, J. P. 2147, 2660  
Deesin, T. 2945  
Defang, K. 680  
Deffis, M. de 351  
DeFoliart, G. R. 2935  
Degallier, N. 2358  
Deibel, R. 3246  
Dejoux, C. 1508, 1690, 1691  
Del C. Calderón Aragón, L. 1460  
Del C. Castro, D. 1475  
Del var Petersen, H. 2431  
Delattre, P. Y. 861  
Delecolle, J. C. 160, 1251, 3299  
Deline, T. R. 1889  
Dell'Uomo, G. 3063  
DeLoach, J. R. 452, 892, 1901, 2418, 2437, 3030, 3032, 3367  
Dempah, J. 310  
Denison, M. S. 3129  
Denlinger, D. L. 1611  
Dennis, D. T. 1961  
Dennis, J. A. 193  
Department of Agriculture, Northern Ireland 2212  
Department of Primary Industries, Queensland 16  
Department of Veterinary and Tsetse Control Services, Zambia 1308, 1333  
Depczyk, J. 2707  
Depczyk, M. Adamkiewicz- 2707  
Depner, K. R. 1271, 1272, 1273, 1280, 1282, 1283, 1291, 1292  
Der Hammen, L. van 1957  
Der Molen, J. N. van 201  
Der Schaal, A. W. J. van 201  
Der Erme, A. 771, 772, 773  
Derouin, F. 2147  
Des Rochers, B. 2086, 2087  
Desch, C. 279  
Desch, C. E. 1001, 1002  
Desch, C. E., Jr. 927  
Deshevykh, N. D. 88  
Deshmukh, M. B. 1364  
Deshmukh, P. B. 1561  
Deshpande, S. B. 2181  
Desière, M. 225  
Desjeux, P. 2147  
Deslongchamps, P. 1806  
Desmoras, J. 758  
Desser, S. S. 142  
Desset, M. C. Durette- 692  
Dessouki, S. El- 1599  
Detinova, T. S. 1610  
Detry, M. 1372  
Deubel, V. 2637  
Dev, V. 601  
DeVaney, J. A. 2764, 2765  
Devdariani, Ts. G. 209  
Devine, T. L. 1969  
Dewan, Z. U. 1562  
Dewhurst, C. F. 3385  
Dhadialla, T. S. 2998  
Dhaliwal, S. S. 625, 3274  
Dhillon, M. S. 78, 2916  
Di Deco, M. A. 765, 766, 770  
Di Luciano, V. S. 3177  
Dias, A. P. A. L. 1580, 2399  
Dias, J. A. Travassos Santos 1404  
Dias, J. C. P. 3172  
Diaz, B. Sánchez 5, 6, 561  
Diaz-Nájera, A. 2398  
Dicker, R. W. 3079  
Dickerson, W. A. 1999  
Dickinson, R. G. 263  
Dickson, S. L. 3211  
Diehl, P. A. 270, 271  
Digoutte, J. P. 1637, 1826, 2038, 2637, 2758, 3295  
Dikae, B. Yu. 1941  
Dillard, C. R. 2891  
Dillwith, J. W. 2706  
Dimova, V. I. 1385  
Dinkel, J. 2668  
Dinulescu, D. 980  
Dipeolu, O. O. 500, 3415  
Disi, A. M. El- 365  
Dittrich, L. 1939  
Division of Animal Health, CSIRO, Australia 779, 2832  
Division of Entomology, CSIRO 18, 19, 2831, 2895  
Dixon, K. E. 2656, 2657  
Djigounian, A. 1254, 1255  
Do Prado, A. P. 195, 2268  
Doane, O. W., Jr. 1906  
Dobbelaere, D. A. E. 2215, 3075  
Dobrokhoto, B. P. 496  
Dobryninski, L. 1562  
Dobrzynski, L. 2371  
Dobson, R. M. 1972  
Dodd, G. D. 1143  
Doesburg, P. H. van 1017  
D'Offay, R. M. 1825  
Dohany, A. L. 725, 1412, 1973, 1974, 2812  
Dolan, T. T. 246  
Dolder, H. 808, 1510, 2022  
Dominguez Rubio, Y. 1466  
Domrow, R. 508, 1416, 1653, 2659, 3102, 3103  
Donato, H., Jr. 460  
Dongre, T. K. 2056  
Donnellan, J. F. 2194  
Donnelly, F. B. 182  
Donnelly, J. 3398  
Dorn, S. 3436  
Dorzh, Ts. 2691  
Dos Santos, I. 2139  
Doster, G. L. 2001  
Doszhanov, T. N. 446, 681  
Dotoum, B. 1303  
Dou, G. L. 567  
Doube, B. M. 959  
Doucet, M. M. 58  
Douthwaite, R. J. 872  
Dowling, D. F. 2742  
Downe, A. E. R. 810  
Doyle, J. J. 153  
Dozey, J. Stenton- 2439  
Drabek, J. 1440  
Dräger, N. 2241  
Drerup-Eilker, K. 2752  
Dreyer, D. 1341  
Driggers, D. P. 3234, 3235  
Drobosina, V. P. 2596  
Drummond, R. O. 256, 441, 494, 2739, 2853  
Du Plessis, J. L. 945  
Duarte Espinoza, G. A. 2138  
Dubash, C. J. 2377  
Dubianskaya, L. D. 1516  
Dubynskii, M. A. 1516  
Dudich, A. 1752



- Duhrkopf, R. E. 2036, 2631, 2930
- Dujardin, J. P. 1853
- Dulanto, F. de 726
- Dulmage, H. T. 2501
- Dumanoir, V. Cosmao 2350
- Dumas, J. P. 672
- Duncalfe, F. 3088
- Duncan, P. 2185, 3034
- Dunn, J. C. 2464, 2738
- Dunn, J. E. 2465
- Dunning, L. L. 1953
- Dunwell, G. H. 258, 259, 260
- Dupras, E. F., Jr. 2109, 2112
- Durand, P. 958
- Durbaca, S. 1184
- Durden, L. A. 1189
- Dureja, P. 2506
- Durette-Desset, M. C. 692
- Duriez-Vaucelle, T. 1669
- Durović, M. 3109
- Dusbábek, F. 238, 239, 283, 924, 1646
- Dusoge, K. 1917
- Dutschewski-Kothes, Y. 1136
- Dutt, A. K. 2372
- Dutt, S. C. 3093
- Dutta, H. M. 2372
- Duvallet, G. 644
- Duve, H. 887, 2711
- Dvorak, D. R. 2193
- Dwivedi, S. R. 103
- Dyachenko, M. A. 1034
- Dyagileva, G. M. 1028
- Dyar, H. G. 2073
- Dyson-Hudson, R. 751
- Dzhanokmen, K. A. 156
- Eads, R. B. 44
- Eason, G. 2
- East, J. 650
- Easton, C. 1626
- Eaton, B. T. 2961
- Eberle, M. W. 342
- Eby, J. E. 2089
- Eckert, H. 1361
- Eckert, M. 787
- Edinburgh School of Agriculture, United Kingdom 2761
- Edler, A. 921
- Edman, J. D. 1529, 2395, 3353
- Edungbola, L. D. 637
- Edwards, A. 799
- Edwards, A. J. 2848
- Edwards, J. P. 2726
- Edwards, J. S. 3126
- Edwards, M. 694
- Edwards, P. B. 2143
- Edwards, R. 484
- Edwards, S. J. 1118, 1119, 1120, 1121, 3147, 3148
- Edwards, T. D. 374, 1814
- Edwards, W. C. 230
- Egerton, J. R. 2248
- Egorov, V. V. 307
- Ehlers-Bhodigen, S. 2815
- Ehrlich, V. D. 2596
- Eibisch, H. 787
- Eichler, W. 1152, 2567
- Eilker, K. Drerup- 2752
- Eisa, M. 1520
- Ejzeje, G. C. 2003
- El Atrous, L. 2256
- El-Beheri, A. 2776
- El-Dessouki, S. 1599
- El-Disi, A. M. 365
- El-Fattah, A. S. A. Abd- 879
- El Fikey, M. S. 2497
- El-Fiki, S. 761
- El-Kammah, K. M. 718
- El-Masry, S. A. 562
- El-Molla, E. H. 562
- El-Nabawi, A. 3394
- El Rab, M. O. Gad 1596, 2192
- El-Refaai, A. H. 2756, 3374
- El Said, A. 497
- El-Sawaf, B. M. 478, 2720
- El-Sawy, M. F. 562
- El-Sebae, A. H. 761
- El-Sherif, A. F. 562
- El-Sinnary, K. 585, 1841
- Ela, S. M. Abul- 3344, 3345
- Elbadri, E. A. 3394
- Elbel, R. E. 2949
- Elce, B. J. 1335
- Elder, J. K. 258, 259, 260
- Elger, B. 469
- Elger, M. 187
- Elghar, M. R. Abo- 3394
- Eliahu, M. N. Ben- 874, 1087, 3324, 3325
- Elisberg, B. L. 3066
- Eliseev, L. N. 2146
- Elkhalfane, A. 2166
- Elliott, M. 1378, 1433, 1435, 1985
- Elliott, S. A. 1550
- Elliott, W. 1386
- Ellis, D. S. 1181
- Ellis, E. A. 2077
- Ellis, R. A. 1197, 1533
- Elorduy de Conconi, J. Ramos 1466
- Elouard, J. M. 1691, 1849
- Elsen, P. 427, 428, 2673
- Elson, M. M. 863
- Elzinga, R. J. 2827
- Emanuelsson, H. 462
- Emberson, R. M. 2482, 3092
- Emel'yanova, O. Yu. 721
- Emery, D. L. 1878, 2164
- Emmerson, F. R. 258, 259, 260
- Emmons, R. W. 1225, 2081
- Enescu, A. 2176
- Engelmann, F. 1489
- Engler, R. 1540
- Engler, S. 1249, 1250
- Enord, D. E. 1528
- Entente Interdépartementale pour la Démoustication du Littoral Méditerranéen, France 2954, 2955, 3265, 3266
- Entomological Society of Korea 1726
- Eouzan, J. P. 1700, 2994
- Erbendruth, W. 802
- Eremina, L. G. 3040
- Ergashev, N. E. 2778
- Erlikh, V. D. 2596
- Ermakov, A. A. 1211, 2593
- Ermishev, Yu. V. 1758
- Ernst, A. 3154
- Eroles, L. C. 3127
- Ershov, N. E. 2735
- Ershova, A. S. 255, 1399
- Escaffre, H. 433, 1703, 2678
- Escalante de Ugueto, C. 579
- Eshghy, N. 2911, 2912
- Espie, I. W. 1341
- Espinoza, G. A. Duarte 2138
- Essen, F. W. van 2042
- Esteban, C. J. de la Serna de 524
- Estes, S. A. 1980
- Estrada Peña, A. 3419
- Ethier, D. B. 2007
- Etingof, R. N. 3153
- Etkind, P. H. 3182
- Eto, M. 1450, 2261
- Etten, J. van 1313, 2685, 3000
- Ettershank, G. 2729
- Ettershank, J. A. 2729
- Evans, D. A. 1181
- Evans, G. O. 302
- Evans, P. D. 1159, 1431
- Evans, W. S. 1625
- Evdokimov, E. S. 1013
- Evenhuis, H. H. 890
- Evenhuis, N. L. 1210, 1241, 2124, 3139
- Everitt, B. 1662
- Evers, R. H. J. 2157
- Everts, J. 2982
- Evstaf'ev, M. N. 440, 1590
- Ewig, J. D., Jr. 481, 1628
- Ewing, S. A. 2222, 2223
- Exner, S. 778
- Eyravo, M. 1326
- Eyre, P. 1889
- Ezell, W. B., Jr. 2910
- Ezike, V. 2918, 2919
- Fabbri, L. 992
- Fabihi, A. 1194, 2037, 2216
- Fabihi, J. P. 1493, 2013, 2569
- Fabricius, J. C. 905
- Fabritius, K. 472, 1895
- Fadzil, M. 2803
- Fagbami, A. H. 2956
- Fah, Liaw Choon 598
- Fain, A. 284, 286, 300, 301, 732, 733, 734, 737, 921, 1000, 1004, 1847, 1853, 2237, 2480, 2483, 2484, 2485, 2659, 2673, 2769, 2770, 2771, 2772, 3096, 3423
- Fairchild, G. B. 1597
- Fairhurst, C. 1096
- Fales, H. M. 1400
- Falk, E. S. 1421
- Fallas B., F. 2154
- Fan, P. C. 2349
- Fan, P. F. 294, 3098
- Fanara, D. M. 1746, 2819
- Fanta, J. 3316
- Faran, M. E. 3248
- Farhang-Azad, A. 2321
- Farley, D. G. 2093, 2096
- Farley, R. D. 461
- Farmer, H. 2766
- Farmer, J. N. 2259
- Farnham, A. W. 1985
- Farnsworth, D. E. 1371
- Farooq, S. 1443
- Farr, R. C. 1783
- Farthing, B. R. 2440
- Fasani, F. 991
- Fast, P. G. 597, 2501
- Fattland, C. L. 2277
- Fattah, A. S. A. Abd-El- 879
- Fauble, V. 327
- Faulkenberry, G. D. 2586
- Fauran, P. 736, 3339
- Faux, A. F. 889
- Fava, A. 2544, 2545
- Fawcett, A. A. 3073
- Fay, R. W. 2126
- Feachem, R. G. 2370
- Federici, B. A. 394, 611, 2084, 2882
- Fedin, A. N. 1485
- Feider, Z. 741
- Feinsod, F. M. 2062
- Feir, D. 544
- Feldlaufer, M. F. 342
- Feldman-Muhsam, B. 300, 1402
- Feliciangeli, M. D. 353, 419
- Fell, D. 1160
- Felton, C. L. 3009
- Feng, W. C. 967
- Fenglian, H. 680
- Fengyun, W. 680
- Ferguson, A. C. 2227
- Ferguson, K. J. 3302
- Ferguson, L. 181
- Fergusson-Laguna, A. 2644
- Fernández, E. 353
- Fernandez, J. M. 2071
- Fernández, N. A. 321
- Fernández, P. García 3078
- Ferrand, G. 3199
- Ferrar, P. 2196
- Ferrara, L. 393, 1700, 2037, 2038, 2688
- Ferraroni, J. J. 1767
- Ferreira Santos, J. L. 2575, 2970
- Ferrell, R. E. 369, 2035, 2940
- Ferro, D. N. 2274, 2481, 2482
- Ferrucci, L. 388, 1831, 2894
- Fetisova, N. F. 3399
- Feuerborn, C. Trepte- 475
- Fevrier, J. 1088, 1884, 2684
- Fichoux, Y. le 1967
- Fidalgo, P. 555
- Field, W. N. 3291
- Figueroa Marroquin, H. 2151
- Fiji, Ministry of Agriculture and Fisheries 1658
- Fikey, M. S. El 2497
- Fiki, S. El- 761
- Filipchenko, V. E. 1516
- Filippich, C. 862, 1253
- Filippova, N. A. 3080
- Filippova, V. V. 1548
- Fincher, G. T. 2426
- Finelle, P. 1083, 1874
- Finlayson, L. H. 2403
- Finney, J. R. 1817, 3206
- Fiore, S. L., Jr. 1176
- Fischer, H. M. 1570
- Fischer, U. 3436
- Fish, D. 2901, 2902
- Fisher, T. W. 677, 2345
- Fishwick, F. B. 2509
- Fitzgerald, S. A. 2037
- Fivaz, V. 2220
- Flacke, W. 2404
- Flannagan, J. F. 1279, 1281
- Flaviano, A. 1566, 1567
- Fleetwood, S. C. 3278
- Flesjå, K. I. 1424, 1425
- Fletcher, K. C. 2234
- Fletcher, M. J. 1545
- Fletcher, M. R. 3009
- Fletcher, P. L., Jr. 522
- Fletcher, T. B. 1152
- Florkiewicz, R. Z. 1839
- Flower, P. J. 285
- Floyd, M. 1407
- Flück, V. 1438
- Focks, D. A. 65, 1756, 1762, 2125, 2126, 3226
- Foedorova, M. V. 594
- Foehse, M. C. 2436
- Foil, L. D. 304
- Folorunsho, O. J. 1309
- Fominykh, V. G. 3040
- Fondren, J. E., Jr. 191
- Food and Agriculture Organization 1082, 2825, 3128, 3237, 3328
- Forattini, O. P. 1256, 1744
- Ford, J. 1318, 1587
- Ford, M. G. 2788
- Foreyt, W. J. 2186
- Forrester, D. J. 837
- Forsyth, B. A. 170
- Fortunato, P. J. 592
- Foster, G. G. 167, 668, 1897, 2202, 2435
- Foster, G. W. 837
- Foster, T. S. 1451
- Fourie, P. B. 485
- Fournier, C. R. 1166, 3156
- Fowler, H. G. 2555
- Fowler, J. E. 1816
- Fowler, J. E. F. 80, 2125, 3232, 3243
- Fowler, N. O. 309
- Fox, I. 2136, 3247
- Fraenkel-Conrat, H. 525
- Fraenkel, G. 3038, 3361
- Fraenkel, G. S. 2834
- Fraiha, H. 1256, 1257, 1258, 1259
- França, J. T. 3167
- France, Entente Interdépartementale pour la Démoustication du Littoral Méditerranéen 2954, 2955, 3265, 3266
- Franceschini, N. 3041
- Francke, O. F. 1008
- Franco, M. G. 665
- Francy, D. B. 44, 393, 563, 1749, 2037, 2038, 2074, 2219, 2629, 2914, 2944, 3405, 3406
- Frank, J. H. 1482
- Franklin, R. 2557
- Franssen, F. F. J. 2225
- Frantsevich, L. I. 2830
- Franz, M. 605
- Fredeen, F. J. H. 2669
- Freitas, E. N. de 3224
- Freitas, R. B. 2655, 3224
- French, A. S. 1491
- Frey, C. 1506
- Freyvogel, T. A. 842, 3196
- Frézil, J. L. 2994
- Frezil, S. L. 1310
- Friedhoff, K. 1394
- Friedman, S. 2834
- Friend, W. G. 1238
- Friesen, M. K. 1279
- Frietas, E. N. 2898

- Frapp, P. J. 1153  
 Frischknecht, M. L. 3436  
 Frommer, R. L. 2122, 2400, 2976, 2977  
 Frost, D. B. 2130  
 Fry, L. 347  
 Fuchs, M. S. 125, 592, 1542, 1761, 2595, 2598  
 Fudalevich-Nemchik, V. 548  
 Fuhrmann, F. 1525  
 Fujita, Y. 2502  
 Fukai, K. 3286  
 Fukoto, T. R. 2265  
 Fukuda, T. 3250  
 Fukui, M. 785  
 Fukushima, H. 880  
 Full, R. J. 2556  
 Füller, H. 3154  
 Fultz, T. O., Jr. 383  
 Funatsu, M. 891, 1904, 2450  
 Fussell, E. M. 2920  
 Fye, R. L. 455, 904  
 Fyfe, R. 954  
 Gaaboub, I. A. 1754  
 Gaafer, S. A. 2646  
 Gabre, W. 2776  
 Gabriel, M. 739  
 Gad, A. M. 1198, 1199  
 Gad El Rab, M. O. 1596, 2192  
 Gaddis, C. H., Jr. 1387  
 Gadzhizalov, D. M. 899, 900  
 Gaidamovich, S. Ya. 3307  
 Gainsburg, D. M. 3404  
 Galati, E. A. B. 2970  
 Galindo, J. Gutiérrez 3419  
 Galindo, P. 583, 584, 2078, 2923  
 Gall, B. G. 27  
 Gallahan, D. 751  
 Gallinelli, G. 758  
 Galloway, I. D. 1454  
 Galowalia, M. M. S. 203  
 Galun, R. 874, 1087, 1471, 2326, 3324, 3325  
 Gammon, D. W. 3435  
 Gander, E. S. 842  
 Ganguly, S. K. 2374, 3294  
 Garber, M. 3182  
 García Ávila, I. 849  
 García, B. A. 1442  
 García, C. 3250  
 García de Lomas, J. 3308  
 García, E. S. 354, 3171  
 García, F. Rodríguez 3308  
 García Fernández, P. 3078  
 García, J. C. 1768  
 García, P. Cova 579  
 García, R. 1246, 2086, 2087  
 García R., R. 1464  
 García Yáñez, Y. 352  
 Gard, G. P. 2033  
 Gardiner, B. O. C. 809  
 Gardiner, P. R. 875, 2162  
 Garms, R. 1581  
 Garrett, W. D. 373  
 Garrido, G. C. 116  
 Garris, G. I. 1936  
 Garry, R. F. 835  
 Garza, J. G., Jr. 256  
 Garza, J., Jr. 494, 975  
 Gaskins, C. B. 914  
 Gáspár, M. Lovász- 1436  
 Gasperi, G. 2171  
 Gataky, G. J., Jr. 1670  
 Gatehouse, A. G. 2680  
 Gates, D. B. 1089  
 Gaugler, R. 1858, 2396, 2397  
 Gaven, B. 93, 581, 1710, 1711, 2886, 3266, 3296, 3297, 3298  
 Gawaad, A. A. A. 1623  
 Gaxotte, P. 833  
 Gearhart, H. L. 604  
 Gebert, F. Webb- 3141  
 Geck, R. 2495  
 Gee, J. D. 1431  
 Geevarghese, G. 3090  
 Geis, K. U. 3055  
 Gelashvili, D. B. 307  
 Gemperlein, R. 2177  
 Genov, T. 689  
 George, T. D. St. 862, 866, 1253, 3303  
 Georges, A. J. 2066  
 Georgiou, G. P. 392, 1221, 1683, 2104, 2105, 2110, 2353, 2877, 2924, 3238, 3281  
 Geraerts, W. P. M. 1489  
 Gerberg, E. J. 626  
 Geren, C. R. 2498  
 Gerhardt, R. R. 661  
 Germain, M. 393, 1411, 2037, 2038, 2637  
 Germond, J. E. 270  
 Gerold, J. L. P. A. 2878  
 Gerrish, R. R. 1155  
 Gersch, M. 787  
 Gerson, U. 931  
 Gerwen, A. C. M. van 2702  
 Gettinby, G. 2  
 Gheorghiu, T. 95  
 Ghiasuddin, S. M. 1736  
 Ghizdavu, I. 1012  
 Ghose, J. N. 1260  
 Ghosh, K. K. 1845  
 Ghosh, M. R. 2792  
 Ghosh, T. K. 1260  
 Giang, P. A. 2829  
 Giangrande, A. 73  
 Giannetti, M. 646, 1092  
 Giannotti, O. 1160  
 Giap, G. 1798  
 Gibbons, D. S. 1926, 1927  
 Gibbons, K. 2699  
 Gibbs, P. H. 2400, 2976  
 Gibet, L. A. 491  
 Gibney, V. J. 1179  
 Gichang, M. M. 2737  
 Giglioli, M. E. C. 626, 3205  
 Gijon, E. Pascual Sánchez- 129  
 Gil Collado, J. 243  
 Gilbert, B. 560, 807, 1746  
 Gilbert, B. N. 441, 974  
 Gilby, A. R. 1159  
 Gilfillan, R. F. 3182  
 Gill, B. J. 801  
 Gill, K. 1442  
 Giller, P. S. 1223  
 Gilles, T. C. 861  
 Gillespie, B. I. 2619  
 Gillies, M. T. 613, 1792, 2363  
 Gillies, S. 1834, 1835  
 Gillman, S. A. 2459  
 Gillott, C. 540  
 Gilmore, C. 3005  
 Gilot, B. 2743  
 Gimeno, A. L. 3115  
 Ginevan, M. E. 314  
 Ginoux, P. Y. 2994  
 Giurca, I. 75, 1184, 2039  
 Glancey, B. M. 1388, 3058  
 Gleich, G. J. 1933  
 Glick, A. 2002  
 Glines, M. V. 240  
 Glover, A. 1388, 3058  
 Glukhov, V. F. 1029  
 Glukhova, V. M. 3300  
 Glushchenko, N. P. 1030  
 Goddeeris, B. 123, 1900  
 Goettel, M. S. 412  
 Goff, M. L. 513, 981, 1005, 1422, 1796, 1968, 2235, 2237, 3095, 3426, 3428  
 Goldbaum, M. 3172  
 Goldberg, L. J. 2085  
 Goldenberg, S. 1981  
 Golder, T. K. 149  
 Goldsmith, E. 1432  
 Goldsworthy, G. J. 1685  
 Golini, V. I. 1902  
 Gollands, B. 417  
 Golubovskii, N. Yu. 1027  
 Gomes, A. de C. 2970  
 Gomes, M. L. C. 2655, 2658  
 Gomez, M. S. 1971  
 Gomez, M. V. 1677  
 Gonçalves Filho, W. 2857  
 Goncharov, A. I. 816  
 Goncharova, A. A. 1032  
 Gong, Z. D. 569, 2246  
 Gonidec, G. le 1244  
 González, A. 1473  
 González, D. 1427  
 González, E. F. 236  
 Gonzalez, J. P. 2066, 3295  
 González-Ramos, M. 291  
 Goode, J. 3151  
 Goodenough, J. L. 1132, 2169  
 Goose, J. 2325  
 Gopaklo, E. L. 1025  
 Gopalakrishna Reddy, T. 2494  
 Gorchakovskaya, N. N. 1036  
 Gordon, A. E. 2666  
 Gordon, D. C. 1442  
 Gordon, E. N. 2119  
 Gordon, M. A. 2240  
 Gordon, S. W. 1196  
 Gorkalo, E. L. 1757  
 Gornostaeva, R. M. 416, 2647, 2648  
 Gorodinskiĭ, A. I. 3153  
 Goryshin, N. I. 1  
 Gothe, R. 498, 757, 3395  
 Goulding, R. L. 2267  
 Gouteux, J. P. 1696, 1872, 2989, 2990, 2991, 2992, 2993, 3320  
 Goyette, D. 2063  
 Gozhenko, V. A. 1031, 3191, 3263  
 Gradanin, S. 688  
 Gräffner, G. 1721  
 Graham-Bryce, I. J. 2503  
 Graham, L. L. Mackenzie- 3244  
 Graham, N. P. H. 162  
 Graham, O. H. 1132, 1362  
 Grainger, C. R. 1825  
 Gramiccia, G. 829  
 Granata, A. R. 3115  
 Granata, L. 786  
 Granath, W. O., Jr. 628, 1390  
 Grandjean, P. H. Vercammen- 1660  
 Granett, J. 1848  
 Granger, N. A. 3134  
 Grant, B. 1608  
 Grant, C. D. 2079, 2385, 2411, 2495  
 Grant, L. S. 845  
 Gratz, N. G. 1555, 2315  
 Graves, P. M. 1549  
 Gray, A. J. 1452  
 Gray, A. R. 184, 1870  
 Gray, J. S. 1635  
 Gray, M. A. 2162  
 Grayson, M. A. 3246  
 Greathead, D. J. 437, 2532  
 Grebenyuk, R. V. 1033  
 Green, A. W. 1630  
 Green, C. A. 81, 1545  
 Green, D. B. 1717  
 Green, P. E. 194  
 Greenberg, B. 1730  
 Greenberg, J. 2266, 2267  
 Greene, A. 2457  
 Greenstone, M. H. 1483  
 Greenwood, R. 2788  
 Greer, K. E. 915  
 Gregor, F. 3016  
 Gregory, M. W. 2239  
 Greig, W. A. 1298, 1299  
 Grešiková, M. 3069  
 Gretz, G. H. 2700  
 Greuter, H. 1438  
 Greve, J. H. 1978  
 Griffiths, B. B. 845  
 Griffiths, C. L. 2439  
 Griffiths, D. A. 193  
 Grigolo, A. 2171  
 Grimmer, O. 3106  
 Grimstad, P. R. 577, 2900  
 Grinnell, E. R. 556  
 Grodhaus, G. 2081  
 Grokhovskaya, I. M. 318, 491, 2745  
 Gromashevskii, V. L. 251  
 Grootenhuis, J. G. 709, 2474  
 Grosscurt, A. C. 466, 1449  
 Grunewald, J. 1268  
 Grupp, G. 309  
 Grupp, I. L. 309  
 Gruvel, J. 1694, 1868, 1876, 1879  
 Grzybowska, M. 679  
 Grzywiński, L. 2564  
 Gsell, L. 1438  
 Guan, L. R. 421, 868  
 Guarita, O. F. 812  
 Gubaĭdulin, N. A. 88  
 Guedes, A. da S. 2049  
 Guedes, A. S. 1016  
 Guediche, M. 2256  
 Guelte, L. le 3116  
 Guenther, P. E. 1644  
 Guerin, B. 1964  
 Gueron, M. 309  
 Guevara Pozo, D. 3117  
 Gueye, A. 1301  
 Gugushvili, G. K. 3408  
 Guidali, F. 1484  
 Guiguen, C. 49  
 Guillén Llera, J. L. 243  
 Guillén Oquendo, M. 3078  
 Guillet, J. C. 1735  
 Guillet, P. 433, 1508, 1703, 2678  
 Guillot, F. S. 3427  
 Guillot, J. 1669  
 Guilloteau, J. 832  
 Guillozet, N. 2453  
 Guilvard, E. 368, 2149  
 Guimarães, J. H. 195  
 Guitton, N. 2296  
 Gunardi, A. T. 2820  
 Gundel, M. 338  
 Gunders, A. E. 3074  
 Gunther, F. A. 1684  
 Gupta, A. K. S. 311  
 Gupta, A. P. 544, 2555  
 Gupta, B. 2620  
 Gupta, B. L. 2175  
 Gupta, R. C. 750  
 Gupta, S. K. 2952  
 Gupta, S. L. 2837  
 Gurgendize, T. V. 209  
 Gürlér, A. 519  
 Gurney, W. S. C. 669  
 Guseva, A. A. 355, 2579  
 Gutiérrez Galindo, J. 3419  
 Gutierrez, J. 3061  
 Gutiérrez, M. Ortega 325  
 Gutiérrez Quiroz, M. 352  
 Gutierrez V., E. 2629  
 Gutkoŭskii, I. A. 841  
 Gutova, V. P. 2733  
 Gutikar, S. N. 3275, 3276  
 Haarlov, N. 922  
 Haarlov, N. 3400  
 Haas, G. E. 1187, 2303, 2330, 2584  
 Habayeb, S. 2537  
 Haberkorn, A. 2624  
 Habermann, E. 2458  
 Habibulla, M. 552  
 Habowsky, J. E. J. 804  
 Hack, W. H. 400  
 Hacker, C. S. 369, 2035  
 Hackett, E. 1176  
 Hackman, W. 2344  
 Hadani, A. 290  
 Hadi, T. R. 1961, 1963, 2810  
 Hafez, M. 477, 2753, 2754, 2756, 3414  
 Haggart, D. A. 976  
 Hago, B. E. D. 3418  
 Haigh, A. J. B. 2737  
 Hair, J. A. 1936, 2222, 2223  
 Haitlinger, R. 323, 729  
 Hajjar, N. P. 206  
 Hájková, J. 1648  
 Hale, R. 1964  
 Hales, J. R. S. 3073  
 Hall, C. A. 175, 2174  
 Hall, D. W. 1232, 2077  
 Hall, I. M. 448, 2501  
 Hall, L. M. 1998  
 Hall, M. J. R. 678  
 Hall, R. D. 1346, 2436  
 Hall, T. A. 2175  
 Hallas, T. E. 287, 1417  
 Hallmon, C. F. 371  
 Halstead, S. B. 390, 1220  
 Ham, M. van 282  
 Hamann, H. J. 1093, 2681  
 Hamel, H. 1320  
 Hammann, I. 1014



- Hammen, L. van der 1957  
 Hammock, B. D. 2795  
 Hammouda, N. A. 2776  
 Hanaoka, K. 1734  
 Handa, S. M. 3020  
 Handel, E. van 91  
 Hanfman, D. T. 1118, 1119, 1120, 1121, 3147, 3148  
 Hanna, G. D. 2121  
 Hannoun, C. 1946, 3392  
 Hanschke, R. 1682  
 Hansen, B. L. 2704  
 Hansen, G. H. 268  
 Hansen, G. N. 2704  
 Hansen, J. A. 3208  
 Hanski, I. 228, 490, 1383, 1928, 3050, 3364  
 Haq, N. 3259  
 Harbov, D. D. 250, 262  
 Hardie, R. 3041  
 Hardy, J. L. 122, 615, 1784, 2082, 2131, 2626, 3258  
 Hardy, R. J. 533, 1720  
 Hargrove, J. W. 152, 1882, 1883, 1885  
 Haridass, E. T. 2021, 3168  
 Harikrider, J. R. 448  
 Harlan, H. J. 2550  
 Harley, J. M. B. 1316  
 Harlos, J. A. 622  
 Haro Arteaga, I. de 352  
 Harrap, K. A. 525  
 Harrell, L. 3253  
 Harris, J. R. W. 641  
 Harris, R. A. 2749  
 Harris, R. L. 2425  
 Harrison, B. A. 620, 2070, 2904  
 Harrison, N. 2983  
 Harrison, R. J. 551, 2881, 3290  
 Hart, R. A. 3204  
 Hart, R. J. 169, 1944  
 Hartberg, W. K. 447  
 Hartley, G. S. 2503  
 Hartman, M. J. 386, 1233  
 Hartmann, S. 498  
 Harvey, J., Jr. 2260  
 Harvey, T. L. 2422  
 Hasegawa, T. 1379  
 Hashiguchi, Y. 1584  
 Haskins, T. 2396  
 Hassan, A. O. 2445  
 Hassan, Z. A. 634  
 Hassell, M. P. 2282, 3146  
 Hastriter, M. W. 1185  
 Hati, A. K. 1845  
 Haufe, W. O. 1270, 1271, 1280, 1282, 1283, 1292  
 Haupt, W. 802  
 Hausen, K. 1621  
 Havelka, P. 1235  
 Hawaiian Sugar Planters' Association 1802  
 Hawley, M. K. 1221  
 Hayakawa, H. 1373, 3022  
 Hayakawa, T. 1418  
 Hayaoka, T. 1606  
 Hayes, C. G. 3233  
 Hayes, D. K. 2829  
 Hayes, J. 1767  
 Hayes, S. F. 2741  
 Hayles, L. B. 104  
 Hazan, A. 3017  
 Hazelrigg, J. E. 2113  
 Heaps, J. W. 1821  
 Heath, A. B. 696  
 Heath, A. C. G. 1409, 2473  
 Hébrard, G. 145, 2676, 2677, 2975  
 Hecker, H. 1527  
 Heckmann, R. 48  
 Hedemann, R. 2448  
 Hedman, B. Kolmodin- 292  
 Heemert, C. van 754  
 Heikkinen, H. J. 1151  
 Heimbucher, J. 687  
 Heineman, S. J. 109  
 Heinemann, S. J. 614  
 Heinz, D. J. 1802  
 Heitz, J. R. 191, 2367, 3355  
 Heleenal, G. A. 2351  
 Helle, T. 3007  
 Hellenthal, R. A. 31, 1171, 1492, 2849, 2854, 3164  
 Helman, R. A. 668  
 Helson, B. V. 1822, 2060, 2064, 2614  
 Hembree, S. C. 376, 1819, 2042, 2400, 2976, 2977  
 Heme, G. 1244, 1411, 2038  
 Henderson, C. C. 1341  
 Hendrix, C. M. 600  
 Hennig, W. 1374, 2511  
 Henrick, C. A. 1442  
 Henry, A. C. 1444  
 Henry, J. E. 1316  
 Hentschel Ariza, E. 1458  
 Hentschel, H. 187, 469  
 Herald, F. 1810, 2430  
 Herath, P. R. J. 2051, 2382  
 Herbert, I. 2472  
 Herbert, I. V. 3086  
 Hernández Contreras, N. 3432  
 Hernández, N. Lorenzo 849  
 Hernández, S. 1117  
 Herreid, C. F., II 2556  
 Herrer, A. 2150  
 Herrin, C. S. 3422  
 Hertlein, B. C. 586, 1553  
 Hervé, J. P. 1411, 2066, 3295  
 Hervy, J. P. 1708, 1714, 2361  
 Hester, P. 3352  
 Hewitt, G. M. 1995  
 Hewlett, M. J. 1839  
 Heyneman, D. 1254, 1255  
 Hiepe, T. 2191, 2691  
 Higashi, S. 1734  
 Higashino, T. 186, 685  
 Higgins, M. L. 2098  
 Highley, E. 1454  
 Highton, R. B. 97, 1551  
 Hightower, B. G. 456  
 Hii, J. L. K. 2055  
 Hildebrand, J. G. 1998  
 Hildreth, S. W. 831  
 Hill, E. G. 2509  
 Hill, L. E. 739  
 Hillen, N. 650  
 Hillier, M. 2983  
 Hilwig, I. 1997, 3287  
 Himel, C. M. 2273  
 Hink, W. F. 112  
 Hinton, H. E. 2280  
 Hintze-Podufal, C. 783  
 Hirano, M. 1441, 2502, 2508  
 Hirashama, A. 1450  
 Hiregoudar, L. S. 1401  
 Hirumi, H. 1467  
 Hiscox, K. J. 2094  
 Hitchcock, J. C. 1236  
 Hitchen, J. M. 3291  
 Ho, T. M. 1800  
 Hoare, C. A. 3396  
 Hoban, B. 2901  
 Hobson, K. 25  
 Hoch, A. L. 2657, 2658  
 Hockin, D. C. 776  
 Hodge, R. H., Jr. 915  
 Hodge, S. J. 1670  
 Hodgson, E. 206, 2379  
 Hoebeke, E. R. 3387  
 Hoedojo, F. P. 1777  
 Hoellinger, H. 1452  
 Hoff, R. 3167  
 Hoffman, D. R. 1930, 2459  
 Hoffman, J. D. 1999  
 Hoffmann, G. 965  
 Hoffmann, J. A. 2180  
 Hoffmann, H. C. 2169  
 Hogan, B. F. 2431  
 Hogmire, H. 2273  
 Holland, G. P. 2310  
 Hollander, A. L. 1899, 3015  
 Hollands Barca, I. 738  
 Hollerbach, P. 780  
 Hollings, N. 1984  
 Hollis, D. 538  
 Holman, G. M. 2418  
 Holman, P. J. 2226, 3412  
 Holscher, K. H. 604  
 Holterman, M. 2630  
 Holzacker, E. L. 1160  
 Hong, T. L. 2816, 2817  
 Hongsbanich, L. 2814  
 Honzáková, E. 238, 239, 924, 1646  
 Hood, D. E. 4, 864  
 Hood, M. W. 1118, 1119, 1120, 1121, 3147, 3148  
 Hoogstraal, H. 241, 275, 968, 1254, 1255, 1949, 2135, 2316, 2750, 3060, 3087, 3137  
 Hooper, G. R. 378  
 Hopkins, D. 2302  
 Hopkins, D. E. 30, 671  
 Hopkins, P. S. 181  
 Hopkins, T. L. 2892, 3260  
 Hopla, C. E. 2313, 2322  
 Horak, I. G. 1341, 1888  
 Hori, K. 3369  
 Horin, A. Ben- 1981  
 Horiuchi, Y. 1418  
 Horn, D. H. S. 889  
 Horn, E. 1620  
 Hornby, J. 586, 1553  
 Horner, N. V. 1753  
 Horning, D. S. 1494  
 Horváth, E. 2458  
 Hoshino, C. 2683  
 Hosie, G. 2341  
 Hossack, K. 397  
 Houk, E. J. 122, 2131, 2626, 3258  
 House, C. R. 333, 2477  
 Houseman, J. G. 810  
 Houten, A. ten 1554, 1555, 1556  
 Howard, D. F. 918  
 Howard, G. W. 1338  
 Howard, J. J. 1528, 3246  
 Howells, A. J. 192, 911, 1382, 2195  
 Howitt, A. J. 2273  
 Howitt, R. E. 574, 1801  
 Hoyos, P. M. de 432, 638, 2156  
 Hsiao, C. 232  
 Hsiao, T. H. 232  
 Hsieh, P. C. 2580, 2864  
 Hsiung, K. H. 421  
 Hsu, K. C. 2223  
 Hsu, P. K. 297, 298, 299  
 Hsu, Y. P. 2349  
 Hsue, W. C. 214, 216, 1618  
 Hu, G. 570  
 Hu, Y. D. 421  
 Huang, C. A. 973  
 Huang, H. T. 1534  
 Huang, W. C. 2032  
 Huang, Y. M. 575, 1236  
 Huard, M. 2251  
 Hudson, K. M. 1335  
 Hudson, P. B. 1771  
 Hudson, R. Dyson- 751  
 Hue, B. 2559  
 Hue, S. H. 1958  
 Huebner, E. 814, 1183, 1499, 2023, 2024, 2862  
 Hueli, L. E. 244  
 Huff, R. K. 1439  
 Huggins, C. G. 2499  
 Hughes, P. B. 168  
 Hughes, R. D. 1353, 3034  
 Hulebak, K. L. 746  
 Hull, P. R. 485  
 Hull, W. B. 2269  
 Hummon, W. D. 384  
 Humphrey, J. D. 663  
 Humphreys, W. F. 1337  
 Hunt, L. M. 441, 974  
 Hunt, R. H. 1545  
 Huong, A. Y. 2151  
 Hürka, K. 3011  
 Hurkat, P. C. 1633  
 Hurlbert, J. 1737  
 Hurlbert, M. 796  
 Hurst, J. M. 230  
 Hussaini, S. A. M. 528  
 Hussein, H. S. 971, 1841  
 Hussein, M. F. 2757  
 Hutchinson, D. B. A. 2292  
 Hutchinson, E. 2920  
 Hutchinson, L. 234  
 Huxsoll, D. L. 725, 1412, 1973  
 Huybrechts, R. 2701, 3360  
 Huyton, P. M. 648, 649, 762, 2679  
 Hwang, Y. S. 1209, 2106, 2107, 2263  
 Hyatt, K. H. 1960  
 Hyeon, S. B. 1446  
 Hyland, K. E. 922, 2772  
 Hyma, B. 3217  
 Ibarra, G. 291  
 Ibrahim, A. T. 1302  
 Ibrahim, M. K. 2497  
 Ibrahim, O. F. 2607  
 Ichinose, M. 727  
 Ichinose, T. 2204, 2846  
 Igarashi, A. 836, 2950, 3286  
 Iglesia, F. A. de la 804  
 Iglisch, I. 780, 895  
 Iglisch, I. 199  
 Ignat'ev, A. M. 3431  
 Ignatjev, A. M. 3431  
 Ignoffo, C. M. 3250  
 Ikeda, J. K. 480  
 Ikeshoji, T. 1624  
 Ilchmann, G. 1480  
 Ilcken, E. H. 2425  
 Ilkal, M. A. 2697  
 Illéšová, D. 1857  
 Il'yashchenko, V. I. 2767  
 Imbiriba, A. S. 479  
 Inada, Y. 3271  
 Inaoka, T. 3022  
 India, Department of Agricultural Research and Education 962  
 Indonisi, H. 2535  
 Iniesta, F. Marín 3308  
 Injeyan, H. S. 1499  
 Inouye, S. T. 791  
 Insect Pathology Resource Center 3118  
 Institute for Medical Research, South Africa 1478  
 International Atomic Energy Agency 1082, 2825  
 International Centre of Insect Physiology and Ecology 15  
 International Livestock Centre for Africa 3327, 3328  
 International Scientific Council for Trypanosomiasis Research and Control 1297  
 Ioffe, I. D. 254, 717  
 Ireson, J. E. 533, 1720  
 Irish, M. 751  
 Irsiana, R. 2810  
 Irvin, A. D. 698, 2215, 3075  
 Irving, S. N. 211, 3238  
 Isaev, V. A. 130  
 Isaeva, N. M. 1025  
 Iseki, A. 1624  
 Ishak, R. 2655  
 Ishay, J. 3051  
 Ishay, J. S. 483  
 Ishida, F. 288, 983  
 Ishida, N. 2907  
 Ishiguro, M. 891, 1904  
 Ishihata, G. K. 812  
 Ishii, A. 727, 3097  
 Ishii, T. 111  
 Ishikawa, H. 2857  
 Ismail, I. A. H. 96  
 Ismail, M. 306  
 Ismail, M. T. 631, 2144, 3306  
 Ismailov, G. D. 1051  
 Issi, I. V. 1890  
 Istock, C. A. 587, 1224  
 Itagaki, H. 288, 983, 1423  
 Itâmies, J. 2957  
 Itard, J. 1695  
 Itaya, N. 1441, 2502  
 Ito, K. 2921  
 Ito, S. 2320, 3286, 3312  
 Ito, Y. 880  
 Ivanov, V. P. 305, 3431  
 Ivanova, G. B. 1893  
 Iversen, J. O. 104  
 Iwannek, K. H. 1093, 2681  
 Iwantsch, G. F. 1724  
 Iwarsson, K. 1656  
 Iwasa, M. 2419  
 Iwuala, M. O. E. 602, 2003, 2210  
 Izotov, V. K. 89

- Jachmann, F. 2461  
 Jackson, J. 1813  
 Jacobi, J. D. 922  
 Jacobson, R. S. 487  
 Jacobson, S. 751  
 Jaffe, H. 2829  
 Jaffe, J. J. 838  
 Jagannath, M. S. 1401  
 Jagannathan, J. 2715  
 Jain, T. C. 3014  
 Jakob, W. L. 2074, 2629, 2914, 2944  
 James Cook University, Queensland 2836  
 James, P. J. 173  
 Jamil, Z. 2773  
 Jamnback, H. 1858  
 Jamuna 1522  
 Jamuna, R. 2375  
 Janabi, B. M. Al- 502  
 Janbakhsh, B. 2912  
 Jander, R. 2557  
 Janes, N. F. 1378, 1985  
 Jani, J. P. 2952  
 Jansen, C. G. 1205, 1206, 1795  
 Jansen, M. 3021  
 Jarnagin, F. N. 2558  
 Jayakar, S. D. 2959  
 Jayakumar, A. 2494  
 Jayaraman, K. 1522, 2375  
 Jayasekera, N. 1205, 1206, 1795  
 Jeffery, G. M. 843  
 Jeffrey, I. G. 506  
 Jellison, W. L. 966  
 Jenni, L. 153  
 Jennings, F. W. 1298, 1299  
 Jennings, M. 138, 627, 635  
 Jensen, P. V. 2704  
 Jerrard, P. C. 486  
 Jeu, M. H. 865  
 Jewell, D. 3283  
 Jez, D. H. 827  
 Ji, S. L. 567  
 Jin, C. F. 421  
 Jirón, L. F. 1344  
 Johansson, L. E. 1661  
 John, E. O. Adekolu- 1322  
 Johnsen, J. O. 2188  
 Johnson, B. K. 1641  
 Johnson, D. M. 1985  
 Johnson, G. D. 2413  
 Johnson, L. 2584  
 Johnson, L. M. 2276  
 Johnson, V. 2789  
 Johnson, W. E., Jr. 3253  
 Johnston, B. G. 1924  
 Johnston, D. E. 926  
 Joint FAO/IAEA Division of Isotope and Radiation Applications of Atomic Energy for Food and Agricultural Development 2825  
 Jones, A. L. 180  
 Jones, C. D. 2270  
 Jones, C. J. 417  
 Jones, E. R. Verrier- 1975  
 Jones, G. S. 720  
 Jones, M. D. R. 1823  
 Jones, R. H. 2384, 2388, 3282, 3301  
 Jones, T. W. 875  
 Jones, W. P. Beresford- 2872  
 Jongejan, F. 699, 2225  
 Jordaan, J. O. 939  
 Jordan, A. M. 148, 1880  
 Jordan, R. G. 1192, 1544  
 Jordan, T. W. 546  
 Jorgensen, C. D. 3422  
 Joseph, M. Ben- 1402  
 Joshi, A. G. 2794  
 Joshi, G. C. 608, 1263, 3018  
 Joshi, G. P. 1562, 1633, 2371  
 Joshi, M. V. 3090  
 Joslyn, D. J. 450, 3370  
 Jourdeuil, P. 1715  
 Jovenaz, D. P. 1627, 3388  
 Judd, G. J. R. 2618  
 Juliá, J. Z. 522, 2781  
 Juliano, S. A. 3373  
 Jullien, J. L. 93, 1710, 1711, 2886, 3266, 3296, 3297, 3298  
 Jupp, P. G. 84, 2139  
 Jurberg, J. 2019, 2574  
 Juszat, H. J. 233  
 Justines, G. 2629  
 Kaay, H. J. van der 2865  
 Kabasawa, Y. 727  
 Kabayo, J. 2682  
 Kabayo, J. P. 148, 3319  
 Kabilov, T. 316  
 Kabilov, T. K. 1891  
 Kadarsan, S. 925, 2802, 2807  
 Kadatskaya, K. P. 969, 970  
 Kaddu, J. B. 1114  
 Kadosawa, T. 1624  
 Kados, A. A. 1736  
 Kadyrova, M. K. 445, 1070, 3336  
 Kadyshcheva, A. M. 1033  
 Kaida, K. 3271  
 Kaiser, P. E. 846, 1815, 3243  
 Kakuliya, G. A. 209  
 Kalinke, U. 2191  
 Kalkan, A. 3410  
 Kallapur, V. L. 3028  
 Kalmykova, D. S. 1074  
 Kalra, N. L. 2058  
 Kamal, K. A. 2757  
 Kamdar 1522  
 Kamel, M. Y. 2757  
 Kamel, O. M. 2292  
 Kammah, K. M. El- 718  
 Kamolov, V. I. 2973  
 Kämpe, U. 3322  
 Kamzaev, S. R. 3349  
 Kanda, T. 2921  
 Kang, S. H. 1761, 2598  
 Kang, S. Y. 1958, 2763  
 Kano, R. 662  
 Kanoujia, K. H. 101  
 Kapanadze, E. I. 2572  
 Karaki, T. 2908  
 Kardatzke, J. T. 3231, 3234, 3235  
 Karimi, Y. 364  
 Kariya, A. 1446  
 Karoji, Y. 2907, 2908  
 Karrar, A. E. 1520  
 Karstad, L. 13  
 Kashaeva, G. V. 1758  
 Kashyap, S. K. 2952  
 Kasiev, S. K. 1033  
 Kasimov, A. A. 850  
 Kasymov, Ya. M. 3307  
 Katabazi, B. K. 1328  
 Katondo, K. M. 1318  
 Katsuda, Y. 1437  
 Katsura, Y. 891, 1904  
 Katsuyama, N. 1446  
 Kaufman, W. 2740  
 Kaufman, W. R. 2749  
 Kaufmann, D. L. 2304  
 Kaul, H. N. 606, 3275, 3276  
 Kaul, S. M. 1261, 1262, 1263, 1266, 1267, 2057  
 Kaur, P. 3020  
 Kaur, S. 3020  
 Kaveh, H. Spitalier- 59  
 Kawamoto, F. 22  
 Kay, A. B. 1596, 2192  
 Kay, B. H. 1772, 1840  
 Kaya, H. K. 3025  
 Kearnan, J. F. 258, 259, 260  
 Kearse, T. S. 834  
 Keating, M. I. 1010  
 Kebe, B. 1300, 1301  
 Keil, B. 877, 1593  
 Keirans, J. E. 275  
 Kelada, N. L. 1754  
 Kelleher, J. S. 782  
 Kellogg, F. E. 2001  
 Kelly, J. F. 2891  
 Kelly, T. J. 1542, 2598  
 Kelly, V. P. 349  
 Kelson, R. V. 2385  
 Kemp, D. H. 953, 2471, 3073  
 Kemp, G. E. 1749, 2219  
 Kence, A. 3019  
 Kendrick, R. Killick- 133, 134, 636, 2149  
 Kennedy, A. J. 556  
 Kennedy, L. M. 1613  
 Kennedy, S. I. T. 2376  
 Kenya Agricultural Research Institute 1722  
 Kerdipibule, V. 2945  
 Kern, A. Spiro- 2075  
 Kerr, R. W. 2435  
 Kersavan, P. C. 188, 903  
 Ketel, D. H. 754  
 Kettle, D. S. 863  
 Kevan, D. K. McE. 792  
 Key, G. F. 3113  
 Keyel, R. E. 2460  
 Keymer, A. E. 1391  
 Khaidarov, K. M. 955  
 Khairtudinov, D. G. 1758  
 Khairy, A. E. M. 562  
 Khalifa, R. 2475  
 Khalil, A. 761  
 Khalil, G. M. 968, 1397, 2135  
 Khaliulin, G. L. 1038  
 Khan, A. M. 1562, 2301, 2371  
 Khan, A. Q. 1562, 2371  
 Khan, A. R. 334, 1739  
 Khan, F. U. 573  
 Khan, K. A. 2301  
 Khan, M. A. 1289, 3329  
 Khan, M. A. J. 3165  
 Khan, M. H. 2746  
 Khan, Q. U. 100  
 Khanra, A. S. 1986  
 Khanum, Z. 3165  
 Khelladi, A. 1654  
 Khipi, T. 2691  
 Khitsova, L. N. 2973  
 Khodykina, Z. S. 1060, 1061  
 Khoury, C. 3062, 3063  
 Khromova, L. A. 883  
 Khuddus, C. A. 923  
 Khudyakov, I. S. 491  
 Khurad, A. M. 898  
 Kickert, L. 1009  
 Kieffer, M. 363, 1417  
 Kien, T. 3193  
 Killick-Kendrick, R. 133, 134, 636, 2149  
 Kilochitskiĭ, P. Ya. 402, 1025, 2590  
 Kilonzo, B. S. 2030  
 Kimsey, R. B. 2083  
 Kimura, R. 1167, 2540, 3152  
 Kind, L. S. 295  
 King, C. C. 835  
 King, E. G. 1999  
 King, M. 835  
 King, R. C. 2328  
 King, R. E. 1496  
 King, S. D. 845  
 King, T. P. 3381  
 Kingsolver, J. G. 587  
 Kinneer, J. F. 889  
 Kinney, R. M. 1749  
 Kinoshita, Y. 2265  
 Kirby, M. D. 1118, 1119, 1120, 1121, 3147, 3148  
 Kirkwood, A. C. 3101  
 Kirschfeld, K. 1912  
 Kirschfeld, K. 3041  
 Kirsten, D. 3420  
 Kirtaniya, S. Deb- 2792  
 Kiskin, A. B. 1218, 1982  
 Kismali, S. 3150  
 Kitzmiller, J. B. 2068  
 Kiyasov, A. Ya. 853  
 Kiyooka, F. 2508  
 Klare, G. 3154  
 Klein, J. M. 1637, 2211, 2758, 3060  
 Kleijn, J. E. 1238  
 Klempner, H. G. 2207  
 Kleitsov, E. D. 1718  
 Kline, D. L. 1842  
 Klisenko, G. A. 3307  
 Kloft, E. S. 1091  
 Kloft, W. J. 1091  
 Klomp, J. S. H. 2236  
 Kloter, K. O. 704  
 Klowden, M. J. 2137  
 Knapp, E. W. 2441  
 Knapp, F. W. 252, 710, 1810, 2430, 2829  
 Knell, J. 3342  
 Kniepart, F. W. 1358  
 Knight, A. L. 1829  
 Knight, D. B. 749  
 Knight, F. B. 1151  
 Knight, J. W. 2609  
 Knight, M. M. 2214  
 Knott, S. G. 258, 259, 260  
 Knowles, G. 610  
 Knudsen, A. B. 1194, 1245, 2918, 2919  
 Knülle, W. 926, 1969  
 Koblet, H. 113, 114  
 Kocan, K. M. 2222, 2223  
 Koch, H. G. 2464, 2465, 2467, 2738  
 Koch, R. B. 879  
 Kochetova, G. A. 2732  
 Kocianová, E. 933, 2232  
 Kodkind, G. Kh. 1036  
 Koeman, J. H. 876, 2157, 3323  
 Koenig, E. Levy- 3149  
 Koepe, J. K. 24, 25, 1732, 2558  
 Koesharjono, C. 2802  
 Kohn, G. K. 1442, 1455  
 Kok, L. P. 2921  
 Kokorin, I. N. 3070  
 Kokwaro, E. D. 651, 3001, 3076  
 Kolebinova, M. 1977  
 Kolebinova, M. G. 1660, 1664, 2490  
 Kolmodin-Hedman, B. 292  
 Kolomatskaya, L. P. 1074  
 Kolonin, G. V. 501, 2734, 3411  
 Koltai, L. 878  
 Kombila, M. 861  
 Kong, D. F. 1526  
 Konigsmann, E. 1177  
 Konkina, N. S. 1380  
 Kononko, A. G. 105  
 Kononov, C. 2202  
 Kononov, C. A. 2435  
 Konstantinović, S. 3111  
 Koolman, J. 753  
 Kopeyan, C. 742  
 Korenberg, E. I. 493  
 Korenberg, E. N. 977  
 Korneeva, L. A. 1027  
 Kornikov, V. V. 1339  
 Koroleva, E. V. 993  
 Korotkov, Yu. S. 716, 1035, 1036  
 Korsgaard, J. 280, 287, 1956  
 Kort, C. A. D. de 3134  
 Kort, P. 734  
 Korvenkontio, M. Brummer- 702  
 Korzh, K. P. 1073, 1074  
 Korzhov, V. M. 402  
 Koshy, T. 2374, 3294  
 Koshy, T. J. 715  
 Koshy, T. K. 1500, 1501, 1502  
 Kosminskiĭ, R. B. 355, 2579  
 Kothas, Y. Deutschewska- 1136  
 Kotlyar, Yu. V. 1718  
 Kotogyan, A. 519  
 Koul, O. 1755  
 Kováčová, E. 924, 3399  
 Kovács, G. 1436  
 Koval, E. Z. 2031  
 Kovalenko, L. G. 1759  
 Kovalevskii, Yu. V. 977  
 Koyumdzhieva, M. I. 1659  
 Kozacik, J. J. 2287  
 Kozak, P. P., Jr. 2459  
 Kozánek, M. 189, 2065  
 Kozlov, D. P. 686  
 Kozlov, M. P. 1186, 2868  
 Kozub, G. C. 666, 1283, 3329  
 Krafur, E. S. 456  
 Kramer, E. 789  
 Kramer, J. P. 3031  
 Kramer, L. D. 1784, 2626  
 Kramer, R. D. 2550  
 Kramer, W. L. 1209, 2118  
 Krampitz, H. E. 2331, 2333  
 Krasantsev, I. I. 1073  
 Krasnobrizhii, N. Ya. 1759  
 Krauthamer, V. 3156  
 Krebs, C. J. 1340



- Kreier, J. P. 242  
 Kremer, M. 127, 160, 414, 631, 1251, 1574, 2144, 3193, 3299, 3304, 3306  
 Kreutzer, R. D. 2923  
 Krieg, A. 1249, 1250  
 Kriegel, M. 2144, 3306  
 Kriger, F. L. 3175  
 Krinsky, W. L. 248, 2025  
 Krishna Murthy, P. 102  
 Kristensen, S. 363, 1417  
 Krištofik, J. 190  
 Kriuchehnikov, V. N. 318  
 Krivosheina, G. G. 3163  
 Krogsgaard-Larsen, P. 2842  
 Kroha, M. J. 3250  
 Kroop, S. 751  
 Krüger, H. 335  
 Kruger, R. M. 1789  
 Krylova, V. N. 1048  
 Krywienicz, J. 597, 2501  
 Krzeminska, A. 473  
 Ksiazek, T. G. 83, 3221  
 Kühn, F. 3189  
 Kuhl, F. 1795  
 Kuhn, H. G. 2214  
 Kuim, A. U. 1072  
 Kuldip Singh 3018  
 Kulkarni, A. P. 2379  
 Kulkarni, S. M. 3090  
 Kul'kova, T. A. 2573, 2777  
 Kultzer, H. 2401  
 Kulzer, H. 1875  
 Kumada, N. 22  
 Kumar, K. 1264, 1265  
 Kumar, R. 2782, 3210  
 Kumari, K. V. 2784  
 Kummel, B. A. 1980  
 Künast, C. 1356, 1360  
 Kunichkin, G. I. 3349  
 Kunkel, J. G. 2007  
 Kunokawa, K. 2050  
 Kuniya, R. W. 2998  
 Kunz, S. E. 2424, 3010  
 Kunz, T. H. 2582  
 Kurahashi, H. 662, 2420, 3339  
 Kuramochi, K. 1913  
 Kurbanov, E. 1013  
 Kurczewski, F. E. 1923  
 Kurenkov, V. B. 716, 2732  
 Kurihara, T. 2906, 2909, 2934, 3225  
 Kuriyama, K. 790  
 Kuroda, A. 2908  
 Kurtii, T. J. 1469  
 Kusharyono, C. 565, 817, 1190  
 Kushnarev, E. L. 2734  
 Kusov, V. N. 1038  
 Kusova, Z. L. 571, 1518  
 Kuster, J. E. 2858, 2859  
 Kusui, Y. 3382  
 Kutsenogii, K. P. 1218, 1982  
 Kuttler, K. L. 943  
 Kutzer, E. 687, 3316  
 Kuusela, S. 3364  
 Kuwahara, Y. 1652, 3424, 3425  
 Kuwano, E. 2261  
 Kuzina, O. S. 1610  
 Kuznetsov, A. V. 1037  
 Kuznetsov, N. V. 1073  
 Kuzoe, F. A. S. 150  
 Kuzovkin, E. M. 1074  
 Kuzybaeva, Kh. K. 1071  
 Kyaw, M. 1247  
 La Manna, A. 991  
 La Salandra, M. 764  
 Labovitz, J. N. 1442  
 LaBrecque, G. C. 1090  
 Labuda, M. 2065, 3087  
 Lacasa Millán, M. I. 3419  
 LaCasse, W. J. 2073  
 Lacey, L. A. 1269  
 Lacey, L. R. 2664  
 Lachet, B. 2743  
 Lackie, A. M. 2561  
 Lacombe, D. 2017  
 Ladera, I. 3188  
 Ladera, I. N. 2819  
 Laguna, A. Fergusson- 2644  
 Lagunes, A. 2110  
 Lainson, R. 1256, 2299  
 Laird, M. 429, 1325, 2031, 2258, 2660  
 Laitinen, M. 3008  
 Lake, D. J. 2416  
 Lalayan, A. A. 1718  
 Lalitha, C. M. 715  
 Laitoo, H. 295  
 Lamatová, Z. 3230  
 Lamb, M. J. 219  
 Lamb, R. J. 2044  
 Lambert, M. 2052  
 Lambrecht, F. L. 1867, 3006  
 Lamont, L. C. 875  
 Lampe, R. M. 268  
 Lamy, J. 2779  
 Lan, M. Y. 1954  
 Lancaster, J. L., Jr. 2433  
 Lanciani, C. A. 2046  
 Lancien, J. 1310  
 Land, M. F. 778  
 Landau, I. 57  
 Landegren, J. 1673  
 Landureau, J. C. 1731  
 Lane, D. D. 314  
 Lane, N. J. 1159, 3407  
 Lane, R. P. 3305  
 Lane, R. S. 2444  
 Langley, P. A. 148, 648, 649, 762, 1094, 2405, 2679, 2682, 3319  
 Lankhuijzen, D. 780  
 Lanotte, G. 132, 133, 636, 2148  
 Lanzaro, G. C. 3251  
 Laone, P. 1498  
 Lapchin, L. 426  
 Lapitskii, V. P. 2845  
 Larios, F. 2221  
 Larsen, P. Krogsgaard- 2842  
 Larsson, R. 2653  
 Lassoued, M. 2256  
 Lau, H. D. 2250  
 Laudani, U. 71  
 Lauer, D. M. 3066  
 Lauga, J. 2607, 2717  
 Laumond, C. 58  
 Launay, H. 2233, 3183  
 Laurence, B. R. 68  
 Lausé, S. 1785  
 Lavchiv, V. I. 901  
 Laveissière, C. 435, 1095, 1695, 1697, 1698, 2982, 2986, 2987, 2988, 2989, 2990, 2991, 2992, 2993, 3002, 3320  
 Laveran, A. 3193  
 Lavin, D. R. 2866  
 Lavin, M. Camino 1124, 1129, 1459, 1461  
 Lavoipierre, M. M. J. 510, 2083  
 Lawrence, J. A. 942  
 Lawton, J. H. 2282, 3146  
 Lazell, M. 1634  
 Lazuick, J. S. 1749, 2219, 2629, 2949  
 Le Berre, R. 1702  
 Le Fichoux, Y. 1967  
 Le Gonidec, G. 1244  
 Le Guelle, L. 3116  
 Le Pannerer, X. 223  
 Le Pont, F. 139, 2969  
 Lea, A. O. 408, 2137  
 Leahy, M. G. 273, 1393, 1648  
 Leake, C. J. 1468, 1825  
 Leaney, A. J. 133, 134  
 Leão, A. E. A. 2660  
 Lebedeva, N. N. 1039  
 Lebedinets, N. N. 3192  
 Lebel, R. R. 927  
 Lebrun, P. 1797  
 LeCato, G. L. 3384  
 Leclerc, M. 2779  
 Leclercq, M. 17, 451, 1349, 2417, 3368  
 Lecroisey, A. 877, 1593  
 Ledger, J. 775  
 Ledger, J. A. 1177  
 LeDuc, J. W. 2655  
 Ledvinka, J. 1639  
 Lee, C. W. 2401  
 Lee, D. K. 1728  
 Lee, T. K. 2122  
 Lee, V. L. 1776  
 Leegwater-van der Linden, M. E. 1102, 2984  
 Leger, A. S. St. 1975  
 Léger, N. 422, 2389, 2390, 3198, 3199, 3200  
 Legner, E. F. 415, 670, 1543, 1911, 2095, 2345  
 Legros, F. 1943  
 Lehman, P. G. 170  
 Lehnert, T. 3052  
 Leibold, C. M. 3371  
 Leigh, C. H. 2130  
 Leippe, M. M. 1442  
 Leitch, B. L. 276, 709, 3075, 3089  
 Leite, C. A. P. 2575  
 Lekhavat, T. 724  
 Lello, E. de 1588, 1589, 3334  
 Lemesheva, L. B. 3413  
 Lemire, A. 482  
 Lenich, R. 3420  
 Lennep, M. van 1178  
 LeNoble, D. Richard- 861  
 Lent, H. 2574  
 León Corona, J. de 1128  
 Leonhard, S. L. 1279  
 Leonovich, S. A. 707, 2744, 3409  
 Lepes, T. 3194  
 Leppla, N. C. 1999  
 Leprince, D. J. 2354, 2881, 3290  
 Leroy, E. 3393  
 Lesser, F. H. 3207  
 Leutskaya, V. F. 2541  
 Levchenko, N. G. 1020  
 Levenbook, L. 1400, 1916  
 Leveque, C. 1691  
 Levi, M. I. 2541  
 Levin, N. A. 1748  
 Levine, N. D. 1215  
 Levy-Koenig, E. 3149  
 Levy, R. 373, 586, 1553, 3352  
 Lewandowski, H. B., Jr. 378  
 Lewis, D. 277, 946, 1396, 1948, 2472  
 Lewis, D. H. 2829  
 Lewis, D. J. 2045, 2530  
 Lewis, L. C. 197  
 Lewis, N. J. 749  
 Lewis, R. E. 3186  
 Lewis, V. R. 1737  
 Lezznerini, C. 3063  
 Li, B. S. 1765, 2605  
 Li, G. Z. 2580  
 Li, K. C. 568, 570, 818, 2580, 3180  
 Li, P. X. 1954  
 Lian, C. G. 2921  
 Liao, H. R. 2231, 2245, 3180  
 Liat, L. B. 565, 1190, 1963, 2821, 3188  
 Liat, Lim Boo 817, 2821  
 Liaw Choon Fah 598  
 Licastro, S. A. de 1745  
 Licastro, S. de 35  
 Lie, K. J. 1774  
 Liebisch, A. 956  
 Lien, J. C. 847, 2031, 2032, 2349  
 Lien, S. M. 1215  
 Lim, B. L. 725, 1973  
 Lim Boo Liat 817, 2821  
 Lim, G. S. 1350  
 Lim, P. K. C. 2885  
 Lim, T. W. 1245  
 Lima, C. P. F. de 1107  
 Lima Cerqueira, E. J. 3185  
 Lin, Z. H. 2231, 2245  
 Linardi, P. M. 1751, 3185  
 Lincoln, D. T. 2471, 3072  
 Lind, P. 1956, 3107  
 Lindauer, E. 2177  
 Linde, T. C. de K. van der 2364  
 Linden, M. E. Leegwater-van der 1102, 2984  
 Lindroth, G. Brinck- 2340  
 Linley, J. R. 2963, 2964  
 Linnavuori, R. E. 2016  
 Linnemann, C. C., Jr. 234  
 Linsens, H. F. 3094  
 Lipke, H. 2047  
 Lipson, M. 172  
 Liscia, A. 1370, 1614  
 Lisitza, M. A. 2935  
 Lissman, B. A. 278  
 Little, I. W. 1146  
 Littlejohn, A. 941  
 Litvov, J. 3172  
 Liu, C. 361, 819, 2864  
 Liu, C. Y. 361, 1188  
 Liu, G. Z. 1954  
 Liu, J. C. 1559  
 Liu, L. C. 2864  
 Liu, P. Z. 868  
 Liu, W. D. 2604  
 Livdahl, T. P. 1242  
 Liz, A. Carrillo 1126  
 Ljaljević, J. 3110  
 Ljaljević, M. 3110  
 Llanos Z., B. 1256  
 Llera, J. L. Guillen 243  
 Llewellyn, C. H. 2656, 2657  
 Lloyd, J. E. 2524, 2525, 3210  
 Lobachev, V. S. 1996  
 Locke, M. 1725  
 Lockey, R. F. 2455  
 Lockhart, W. L. 1284, 1285, 2980  
 Lococo, D. 814, 2024  
 Loeb Cruden, D. 29  
 Lofgren, C. F. 2829  
 Lofgren, C. S. 482, 1388, 1816, 2725, 3058, 3388  
 Logan, K. B. 2639  
 Loiselle, R. 2881, 3290  
 Lok, J. B. 1852, 2981  
 Lomas, J. García de 3308  
 Lonc, E. 488  
 London School of Hygiene and Tropical Medicine 2381, 2616, 2633  
 London, W. T. 1511  
 Longenecker, G. L. 2499, 3114  
 Longenecker, H. E., Jr. 2499, 3114  
 Loof, A. de 2173, 2701, 3360  
 Loomis, E. C. 1953, 2442  
 Loomis, R. B. 982, 1966  
 Loots, G. C. 929  
 Lopes, J. 1908  
 Lopes, O. de S. 2949  
 López, A. Valero 3117  
 López, G. 236  
 Lopez, G. A. 3237  
 López V., G. 2218, 2466  
 Lord, J. 1366, 3024  
 Lord, J. C. 2077  
 Lorenzo Hernández, N. 849  
 Lorimer, N. 2365  
 Loskutov, O. A. 3330  
 Losson, B. 1413  
 Louis, J. 2252, 2253, 2254  
 Lounibos, L. P. 54, 2876  
 Louppen, J. M. W. 736  
 Lourenço, W. R. 744, 2496  
 Lourens, J. H. M. 699, 703  
 Lovász-Gáspár, M. 1436  
 Love, C. L. 906, 907  
 Lovell, J. B. 759  
 Lowe, R. E. 846, 1815, 1816, 2125, 3236, 3243  
 Lowenstein, H. 1956  
 Lowrie, D. C. 2785  
 Lucca, F. L. de 2857  
 Luciano, V. S. di 3177  
 Lucientes-Curdi, J. 3419  
 Luckins, A. G. 1870, 2162  
 Luh, P. L. 1765, 2605  
 Luisi, A. M. 989, 990  
 Lukiyanchikov, V. P. 56  
 Lukoschus, F. S. 301, 735, 736, 1001, 1002, 1004, 2236, 2483  
 Luk'yanchuk, M. P. 1760  
 Luk'yanova, I. V. 1052  
 Lumaret, J. P. 919, 2208  
 Lumb, R. H. 3027  
 Lumiaho, I. 2957  
 Lumsden, W. H. R. 952  
 Luna Dias, A. P. A. 1580, 2399

- Luna, L. L. 415  
 Lundquist, A. 462  
 Lundqvist, L. 921  
 Lüthy, P. 1570  
 Lutz, D. A. 2023  
 Luz, E. 1202, 1203, 1204  
 L'vchiev, V. I. 901, 902  
 L'vov, D. K. 251  
 Lyal, C. H. C. 2527  
 McAlpine, J. F. 2587  
 McCabe, T. L. 2276  
 McCarthy, R. A. 2007  
 McClusky, D. K. 2385  
 McColl, H. P. 1409  
 McDaniel, B. 511, 629  
 McDonald, F. J. D. 1609  
 McDonald, G. 1214, 2632  
 MacDonald, J. F. 487, 2460  
 McDonald, P. T. 380, 2099, 3140  
 MacDonald, R. S. 2064  
 McDonald, S. E. 510  
 McDonell, P. A. 2174  
 McDougall, K. W. 696  
 McE. Kevan, D. K. 792  
 MacFarlane, E. Nimard 1764  
 McFarlane, J. E. 673  
 McGill, T. W. 3402  
 McGovern, T. P. 1762, 1813  
 McGowan, M. J. 492, 979  
 McGregor, A. 3303  
 McGuire, E. J. 804  
 McGuirk, B. J. 2718  
 Machado-Allison, C. E. 1824, 2643, 2644  
 Machi, A. 989  
 Machi, A. M. 990  
 Machin, A. F. 3009  
 McIntosh, B. M. 84, 2139  
 McIntosh, L. 796  
 McIntyre, W. I. M. 1298, 1299  
 McIver, S. 1578  
 McIver, S. B. 827  
 McKeever, S. 447  
 Mackenzie-Graham, L. L. 3244  
 McKenzie, J. A. 2199  
 McKercher, D. G. 266, 267  
 Mackey, A. P. 1348  
 McLaren, I. W. 2632  
 McLean, R. G. 1403, 3405, 3406  
 McNeill, J. C., IV 2913  
 McNew, R. W. 492  
 McQuillan, P. B. 533, 1720  
 Madalengoitia, J. 1828  
 Madalov, N. M. 1033  
 Madan, M. S. 1007  
 Madder, D. J. 1742, 2064  
 Maddern, R. H. 1897  
 Maddox, J. V. 747  
 Maddrell, S. H. P. 809, 2279  
 Madrigal, R. Brenes 2138  
 Maeda, R. 2906, 2909, 2934, 3225  
 Maevskii, M. P. 359  
 Maffi, G. 2202, 2959  
 Maggini, M. 768, 2570  
 Magnarelli, L. A. 185, 1208, 1398, 1603, 1921, 2443  
 Magor, J. I. 1850  
 Magzoub, M. 623  
 Mahadev, P. V. M. 3090  
 Mahadevan, S. 2885  
 Mahal, N. 334, 1739  
 Mahan, S. M. 2215  
 Mahmood, F. 395  
 Mahmood, M. M. 184  
 Mahnert, V. 2029  
 Mahoney, D. F. 2832  
 Maier, W. 3197  
 Maier, W. A. 1198, 1199  
 Maiga, S. 2996  
 Mailhot, Y. 1818  
 Main, A. J. 248, 702, 704, 1408  
 Maina, A. 1332  
 Mair, K. H. 465  
 Maire, A. 672, 1219, 1818, 2063, 2611, 2958  
 Majhi, S. 553  
 Majori, G. 768, 2570, 2937  
 Mak, J. W. 625, 1774, 2885, 3274  
 Maker, D. 2142  
 Maksimov, V. N. 1519  
 Malacrida, A. 2171  
 Malatesta, P. F. 2248  
 Malawista, S. E. 269  
 Malek, A. A. Abdel- 2634, 2635  
 Maler, G. 652  
 Malevannaya, Z. A. 1028  
 Malhotra, D. V. 3093  
 Malik, J. K. 750  
 Mališ, L. 514  
 Málková, D. 1560  
 Maloney, F. A. 1820  
 Malonga, J. R. 2994  
 Malz, D. 783  
 Mamedov, V. I. 850  
 Mamet, J. R. 3141  
 Mamleev, S. R. 1718  
 Man, W. de 3360  
 Mandara, M. P. 3049  
 Mane, A. 1300, 1301  
 Mani, R. 2494  
 Manilla, G. 3064  
 Manju Singh 655  
 Manna, A. la 991  
 Manning, D. L. 1241  
 Manno, A. 1329  
 Manoucheri, A. V. 2917  
 Manzanilla, P. 632  
 Mapp, C. 992  
 Maramorosch, K. 1467  
 March, B. G. E. de 1279, 1281  
 March, C. S. 2194  
 Marchand, A. 1414  
 Marchenko, G. P. 1041  
 Marchette, N. J. 1246  
 Marchetti, R. 2014  
 Marchi, A. 71, 388, 1831, 2894  
 Mariam, S. H. 1306  
 Mariani, G. 769  
 Mariani, M. 769  
 Marín Iniesta, F. 3308  
 Marinkelle, C. J. 3227  
 Markevich, A. P. 1018  
 Markides, A. A. 370, 3267  
 Markovetz, A. J. 29, 1161  
 Markovich, N. Ya. 2588  
 Marks, E. N. 106  
 Marks, E. P. 1453  
 Markus, M. B. 220  
 Maroli, M. 2570  
 Marroquin, H. Figueroa 2151  
 Marsden, J. S. 1924  
 Marsh, N. A. 1929  
 Marshall, A. G. 2281, 2309  
 Marshall, I. D. 2033  
 Marshall, J. 2682  
 Martin, G. E. 1924  
 Martin, I. C. A. 2174  
 Martin, J. E. H. 954  
 Martin, M. D. 889  
 Martín Mateo, M. P. 340, 2850  
 Martin, P. 1438  
 Martin, W. 1168, 1920  
 Martindale, C. B. 1428  
 Martínez, F. 1117  
 Martinez, F. Camacho- 726  
 Martinez, G. 742  
 Martinez, V. 3436  
 Martínez y Tapia, D. B. 1463  
 Martins, U. R. 1989  
 Martsinkovskii, D. T. 1041  
 Martynowicz, T. 2564  
 Marutyan, E. A. 853  
 Mas, J. P. 832, 1798  
 Masake, R. 2215  
 Masalkina, T. M. 2597, 2875  
 Maser, C. 289, 509, 966, 2249  
 Mashhadani, H. M. Al- 616  
 Mashkei, A. N. 1074  
 Mashkei, I. A. 1040, 1057, 1073, 1074  
 Masler, E. P. 125, 2595  
 Mason, G. F. 382  
 Mason, K. 1663  
 Masood, S. 731  
 Masry, S. A. El- 562  
 Massingill, M. J. 2091  
 Masson, C. 2560  
 Mata, R. Zapata 1461  
 Matanmi, B. A. 202, 1113  
 Matechi, H. T. 1328  
 Mateo, M. P. Martín 340, 2850  
 Mathavan, S. 2351  
 Mathews, B. L. 235  
 Mathews, R. S. 1386  
 Mathis, H. L. 1555  
 Mathur, K. K. 1264, 1265, 3018  
 Matsui, M. 1988, 2508  
 Matsumoto, D. E. 461  
 Matsumoto, K. 1652, 3424, 3425  
 Matsumoto, Y. 1624  
 Matsumura, F. 1736  
 Matsumura, T. 85  
 Matsuo, K. 1295  
 Matsuo, N. 2508  
 Matsuo, T. 1441  
 Matthaei, H. D. 1712, 1713  
 Matthews, R. W. 487  
 Matthiesen, F. A. 3433  
 Mattos, S. da Silva 2049, 2072  
 Mattos, S. S. 1016  
 Matuhasi, T. 3097  
 Matyushina, O. A. 2734  
 Matz, G. 2546  
 Maudlin, I. 1865  
 Maunder, J. W. 1142  
 Maung Maung Tun 1496, 1962, 2478, 2775  
 Maupin, G. O. 1403  
 Mauri, R. 984  
 Mauritius, Ministry of Agriculture and Natural Resources and the Environment 224  
 Maury, E. A. 744, 1477  
 Maurya, K. R. 2773  
 Mavros, A. J. 966  
 Mavyaev, K. M. 955  
 Maxwell, D. J. 2543, 3158  
 May, R. M. 2839, 3146  
 Mayer, R. T. 452, 656, 1901, 2418, 3030, 3032, 3367  
 Maynard Smith, J. M. 219  
 Mays, C. E. 1791  
 Mazokhin-Porshnyakov, G. A. 1376  
 Mazurkiewicz, M. 2564  
 Mead, A. P. 3229  
 Mead-Briggs, A. R. 2324  
 Mechulan, M. Romano 1764  
 Medellin, J. A. 1640  
 Medina G., P. 2218  
 Medler, J. T. 1157  
 Medved, R. A. 670  
 Medvedev, S. G. 3179  
 Meegan, J. M. 2135  
 Meek, C. L. 375  
 Meer, R. K. Vander 1388, 3058  
 Meghir, S. 1733  
 Mehler, L. 3026  
 Mehlhorn, H. 272, 2624  
 Mehlitz, D. 3322  
 Mehrotra, P. 1175  
 Mehta, A. R. 3130  
 Meifert, D. W. 455  
 Meigen, J. W. 3315  
 Meillon, B. de 1248  
 Meisch, M. V. 376, 1193  
 Meixun, C. 407  
 Meledzhaeva, M. A. 1636  
 Melioli, G. 989, 990  
 Mello, D. A. 805, 806  
 Mello, M. L. S. 808, 1503, 1510, 2022  
 Mellor, P. S. 630  
 Mel'nik, G. E. 1041  
 Mendelson, D. C. 3182  
 Mendes de Souza, M. C. 1259  
 Mendes, M. F. 3157  
 Méndez, E. 732  
 Mendis, C. L. 1812  
 Meneses, O. 1828  
 Meng, Y. C. 1954  
 Menon, M. 3160  
 Menon, P. K. B. 2600  
 Menzie, C. M. 2790  
 Meola, R. W. 1770  
 Meola, S. M. 452, 656, 2167, 3367  
 Meréchal, L. R. 330  
 Meredith, S. E. O. 3314  
 Merrell, C. 3212  
 Merrett, T. G. 1975  
 Merritt, G. C. 174, 193, 3039  
 Meshcheryakova, I. S. 496, 1380  
 Mestres, R. 1709  
 Metcalf, R. L. 3123  
 Metelitsa, V. K. 1591  
 Metselaar, D. 1825  
 Mews, A. R. 148  
 Meyer, H. J. 474  
 Meyer, J. A. 2433  
 Meyer, J. L. 2120  
 Meyer, R. P. 2101, 2119, 2165  
 Meyer, S. G. E. 1359  
 Meyer, W. 74  
 Meyers, W. E. 2829  
 Mezenev, N. P. 391  
 Mezzanotte, R. 388, 1831, 2894  
 Mgongo, F. O. K. 2200  
 Mhalu, F. S. 3049  
 Michael, S. A. 365, 2756, 3374  
 Michel, F. B. 1964  
 Michelsen, V. 905  
 Micks, D. W. 2133, 2913  
 Middlekauff, W. W. 2444  
 Mijović, M. 3109  
 Mikacčić, D. 237  
 Mikhailova, K. I. 261  
 Milan, P. P. 856  
 Milby, M. M. 380, 2080, 2102, 2103, 2119  
 Miles, S. J. 81, 2369, 2382, 3277  
 Milka, R. 688  
 Millán, M. I. Lacasa 3419  
 Miller, J. A. 2829  
 Miller, J. S. 1930  
 Miller, L. A. 533, 1720  
 Miller, M. C. 1481  
 Miller, R. W. 454, 2428  
 Miller, S. 1213  
 Miller, T. A. 207, 211, 3131, 3143, 3144  
 Miller, T. W., Jr. 373, 586, 1553  
 Mills, A. T. 1897  
 Mills, T. A. E. Platts- 739, 2489, 2492  
 Milošević, D. 3112  
 Miltgen, F. 57  
 Milward-de-Azevedo, E. M. V. 1747  
 Minář, J. 1594, 1996, 3011, 3230  
 Minarzh, Ya. K. 2690  
 Ministry of Agriculture and Fisheries, Fiji 1658  
 Ministry of Agriculture and Natural Resources and the Environment, Mauritius 224  
 Ministry of Health, Cyprus 370, 3267  
 Minor, A. V. 542  
 Minoshima, S. 1734  
 Miranpuri, G. S. 705  
 Mironov, A. N. 2578  
 Mironov, N. P. 1043  
 Mirzaeva, A. G. 2966  
 Mišević, Z. 137  
 Mishaeva, N. P. 3390  
 Mishra, N. K. 798  
 Mishra, R. K. 43  
 Misra, B. S. 1260, 1265  
 Misra, H. K. 311  
 Mitcham, R. P. 2713  
 Mitchell, C. J. 396, 1801, 3149  
 Mitchell, J. A. 2725  
 Mitchell, L. 1212  
 Mitra, A. C. 2620  
 Mitra, K. K. 2620  
 Mitsuhashi, J. 886  
 Mittag, J. 1620  
 Mittal, I. C. 1931



- Mittal, O. P. 601  
Mittermayer, T. 1647  
Mittler, T. E. 3133  
Miura, K. 186, 685, 2190, 3366  
Miura, T. 2116, 2925  
Miyagi, I. 1217, 2947  
Miyamoto, T. 1418  
Mladenov, M. 2542  
Moeur, J. E. 1224  
Mogi, M. 98, 99, 588, 1226  
Mogollon, J. 632  
Moh Seng, Chang 413  
Mohamed, A. H. 2497  
Mohamed, N. H. 3293  
Mohammed, A. N. 521  
Mohan, P. C. 3273  
Mohan, P. M. 1164, 1169  
Mohd-Salleh, M. B. 197  
Mohrig, W. 1682  
Mokry, J. 98  
Mokry, J. E. 639, 640, 1817, 1856  
Molen, J. N. van der 201  
Molinar, E. 2221  
Molineaux, L. 829  
Molla, E. H. El- 562  
Mollenhauer, H. H. 3030  
Möller, L. 780  
Molloy, D. 1531, 1858, 2396, 2397  
Moloo, S. K. 1877, 1878, 2164, 3002  
Molyneux, D. H. 150, 650, 1084, 1095, 1096, 1866, 1869, 2866, 2873, 2983  
Monath, T. P. 393, 396, 1749, 2037, 2038, 2219, 2629  
Moncada, E. 2743  
Moncada, L. I. 432  
Mondet, B. 145, 3320  
Monroy, J. 2221  
Monti, M. 566  
Monzu, N. 165  
Moon, H. B. 2763  
Moon, R. D. 1598, 2442, 3025  
Moon, W. B. 2133, 2913  
Moor, B. 2198  
Moore, C. V. 574, 1801  
Moorhouse, D. E. 893, 2654  
Moquillaza, J. 116  
Mora, J. Quiles 3308  
Mora, W. K. 1783  
Morad, A. M. 306  
Moraes, M. A. P. 870, 1580, 2627  
Morallo-Rejesus, B. 2838, 3127  
Moran, D. T. 2547  
Moravčik, P. 204  
Morawcsik, J. 1250  
Morch, J. 922  
Mordue, W. 1685  
Morel, P. C. 951, 957, 958, 1701, 3403  
Moreno, T. 1117  
Moret, J. 2220  
Moreton, R. B. 2798  
Morgan, C. R. 794  
Morgan, D. W. T. 2446  
Morgan, H. G. 1111  
Morgan, N. O. 1601  
Morgan, P. B. 367  
Mori, A. 99, 379, 1226, 2050  
Mori, K. 1988, 2683  
Moribayashi, A. 1377  
Morici, M. 270  
Morlan, H. B. 2126  
Morris, C. D. 1528, 1529, 3246  
Morris, R. S. 258, 259, 260  
Morrison, B. 2227  
Morrison, J. 1512  
Morrison, P. E. 1612, 3028  
Morrow, H. 1375  
Morrow, R. H. 1375  
Morsy, T. A. 365  
Mosconi Bernardini, P. 786  
Mosconi, P. Bernardini 1484  
Moss, A. 751  
Moss, D. M. 618  
Mosse, E. 386, 1233  
Mostafa, M. A. 3374  
Mostaghni, K. 503  
Mota, N. G. S. 1588, 1589, 3334  
Motabar, M. 2912  
Motara, M. A. 593  
Moteyunas, L. I. 3399  
Motoyama, N. 1606  
Mott, K. E. 3167  
Motte, P. 1967  
Mouchet, J. 1692, 1695, 3195  
Moulds, M. S. 2518, 2519, 2520, 2521, 2522, 2523  
Moulinier, C. 1798  
Mount, G. A. 1937, 2467, 3059  
Moussa, A. Y. 1925  
Moussa, M. A. 1525  
Mowbray, D. L. 313  
Mozheiko, L. P. 884  
Mrčiak, M. 930, 2244  
Mtoi, R. S. 2030  
Mtuya, A. G. 1089  
Muhsam, B. Feldman- 300, 1402  
Mujtaba, S. M. 617  
Mukanov, S. M. 403, 2594, 2962  
Mukerjee, S. K. 2506  
Mukhammadkulov, M. 3080  
Mukherjee, K. K. 2620  
Mukhtar, R. 3255  
Mukiyama, T. K. 2034  
Mulhern, T. D. 3202  
Mulla, M. S. 78, 1209, 2084, 2106, 2107, 2111, 2118, 2263, 2413, 2664, 2916, 3346  
Mullenix, J. 2074  
Mullens, B. A. 661  
Müller, P. 2404  
Muller, R. 952  
Müller, Z. O. 2710  
Mulligan, F. S., III 2088, 2925, 2939  
Mumcuoglu, Y. 300, 723, 803, 820, 923, 1148, 1174, 3215, 3383  
Munaf, H. B. 2802, 2807  
Munakata, K. 317, 2796  
Munif, A. 565, 2819  
Muñiz, A. M. 1130  
Muñoz de Hoyos, P. 638  
Muñoz de Hoyos, P. 432, 2156  
Muradov, Sh. M. 1521  
Muralcedharan, K. 1401  
Murdoch, L. L. 2548  
Murlis, J. 2270  
Murray, A. B. 1671, 2227  
Murray, D. A. 196  
Murray, E. S. 967  
Murray, M. 1298, 1299  
Murray, P. K. 1298, 1299  
Murthy, P. Krishna 102  
Musa, B. E. 3418  
Mushkambarova, M. G. 489  
Muth, D. J. 2219, 2949, 3406  
Muthukrishnan, J. 28, 2351  
Mutinga, M. J. 1086, 1114, 2971, 2972  
My-Yen, L. T. 3424, 3425  
Myat, A. 1562, 2371  
Myrzin, A. S. 56  
Nabawi, A. El- 3394  
Nabokov, O. V. Viktorov- 1027, 1028, 1056  
Nadchatram, M. 513, 730, 981, 1000, 1974, 2479, 2483, 2769, 2771, 2811  
Nadgornaya, N. I. 1034  
Nagel, H. G. 2043  
Nagel, P. 2404  
Naidu, R. C. M. 2783  
Naiff, R. D. 2299  
Nair, R. B. 3434  
Na'isa, B. K. 1330  
Nájera, A. Diaz- 2398  
Nakai, T. 983  
Nakamura, H. 3286  
Nakanishi, E. 2508  
Nakanishi, K. 2554  
Nakavachara, V. 620  
Nalbandyan, V. P. 1718  
Nalim, S. 1961  
Naltsas, S. 1670  
Nanjiyo, K. 1446  
Nantulya, V. M. 153  
Narang, N. 1768  
Narang, S. 1768  
Narasimham, M. V. V. L. 101, 3223  
Narayan Rao, P. 1914  
Narendran, T. C. 3056  
Narmatov, Kh. A. 1604  
Nassif, M. 2292  
Nath, D. R. 2623  
Nath, V. V. N. 2599  
Nathan, M. B. 2386, 2387  
Natori, S. 3363  
Naumov, R. L. 2733  
Navarrete, I. 1117  
Nay, T. 193  
Nayar, J. K. 837, 2609  
Nazarov, V. P. 1718  
Nazarova, I. V. 1042, 1675, 2571  
Nazarova, Sh. 3347  
Nazarova, Sh. N. 1617  
Nazmi, N. H. 3374  
N'Dow, W. S. M. 1298, 1299  
Ndumu, J. R. 1116  
Neal, R. A. 351  
Neale, E. 1975  
Nelson, B. C. 2319  
Nelson, D. R. 2277, 2706  
Nelson, J. H. 2400, 2976  
Nelson, M. 116  
Nelson, R. L. 380, 590, 2103  
Nelson, W. A. 666, 3357  
Nel'zina, E. N. 1043  
Nemchik, V. Fudalevich- 548  
Nemilova, T. N. 1718  
Nemny, N. E. 1892  
Nepoklonov, A. A. 253, 2691  
Nepoklonova, M. I. 253  
Neri, M. 2014  
Neronov, V. M. 695  
Nesbitt, B. F. 1716  
Nessem, S. L. 478, 2720  
Neste, D. van 512  
Nettles, V. F. 1155  
Neves, D. P. 2018  
Neveu, A. 426  
Nevill, E. M. 84  
Newberry, K. 2946  
Newell, F. G. 3362  
Newlands, G. 1428, 2257  
Newsom, J. H. 1176  
Newson, H. D. 378, 1807, 2368  
Newson, R. M. 246  
Newton, J. 693  
Ng, H. K. 739  
Ng, S. K. 1657  
Ngoka, J. M. 2972  
Nguyen-Hoang-Nam 1452  
Nguyen, T. X. 2607  
Niaz, S. 1557, 2938  
Nicholson, A. J. 669, 1369  
Nickel, C. 3370  
Nickels, D. G. 3104  
Nickerson, J. C. 1387  
Nickerson, K. W. 1536  
Nickle, W. R. 1538  
Nicolescu, G. 1788  
Nicolis, G. 1576  
Nielsen, L. T. 210  
Niemenen, M. 3008  
Niesiolowski, S. 2391, 2394  
Nijhout, M. M. 1732  
Niki, T. 464  
Nikitchenko, N. T. 2736  
Nikitina, N. A. 360, 2342  
Nikolaeva, G. A. 360, 2342  
Nilsson, O. 1661  
Nimard MacFarlane, E. 1764  
Nisbet, R. M. 669  
Nishijima, Y. 1913  
Nishino, C. 1167, 2540, 3152  
Nishioaka, T. 1441  
Nishitani, H. 3271  
Niyazov, A. N. 955  
Niyazov, O. D. 2826  
Niyazova, M. V. 2541  
Niyogi, A. K. 2662  
N'jie, H. 2037  
Noda, K. 3097  
Noe, B. L. 3355  
Nogge, G. 646, 1092  
Nogić, S. 3109  
Nolan, R. A. 588, 2031  
Nomeir, A. A. 206  
Nomura, K. 1606  
Nontapan, C. 2829  
Nordin, J. H. 2007  
Nordon, G. 768  
Normatov, Kh. A. 3336  
Norment, B. R. 304, 3355  
Northern Ireland, Department of Agriculture 2212  
Norton, S. J. 2264  
Norval, R. A. I. 937, 1638, 1942  
Nosek, J. 3087  
Novak, M. 1625  
Novak, R. J. 1234, 2612, 3280  
Novikov, V. G. 1029  
Novikov, Yu. M. 2357  
Nowel, M. S. 3155  
Nowell, W. R. 2117  
Numata, T. 3108  
Nunn, A. J. 739  
Nuorteva, P. 221  
Nuorteva, S. L. 221  
Nurakhzanova, G. N. 88  
Nurulhuda, A. 2170  
Nutting, W. B. 279, 735, 921, 1001, 1002, 2228, 2229  
Nwadiogbu, N. 2210  
Nyindo, M. 149, 3326  
Oatman, E. R. 3372  
Obasaju, M. F. 47  
Obenchain, F. D. 273  
O'Brien, M. F. 1923  
O'Brien, R. D. 1347  
Obukhova, V. R. 3307  
Ocamba, J. G. R. 2215  
Ocampo Candido, A. 1463  
Ochoa, A., J. O. 1295, 1584, 1585, 3312  
Ochssee, G. A. Boon von 2982  
O'Connor, B. M. 1970  
O'Connor, B. M. 3421  
O'Connor, C. T. 2067  
O'Connor, J. D. 125, 2595  
O'Connor, R. J. 3234, 3235  
Oda, T. 2050  
Oddo, F. L. 2127  
O'Dell, T. M. 1999  
Odiambo, T. R. 3001  
Odland, G. C. 2269  
Oehler, D. D. 2425  
Oei, K. G. 1825  
O'Flynn, M. 194  
O'Flynn, M. A. 893  
Ogata, M. 288, 983, 1423  
Ogiso, M. 1734  
Ogston, C. W. 1511  
Ogunji, F. O. 500, 1108, 3415  
Ogwal, L. M. 1110  
O'Hagan, J. E. 263  
Ohashi, M. 603  
Ohba, M. 1228  
Ohkawa, K. 3366  
Ohno, I. 2508  
Ohshima, K. 2261  
Ohsumi, T. 2502  
Ohta, K. 1418  
Ohta, M. 2204  
Ohtaki, T. 886, 1377  
Ojijo, E. 2448  
Okada, K. 2508  
Okaila, A. K. Al- 2917  
Okazawa, T. 1295, 1582, 1584, 1585  
Okereke, T. A. 619, 921  
Okieweli, S. N. 2996  
Okorie, T. G. 2216  
Okulov, V. P. 86  
Okulova, N. M. 708, 1044, 1066  
Olejníček, J. 238  
Olevall, O. 1661  
Oliva, O. F. P. 2655  
Oliveira Filho, A. M. de 350, 560, 807, 1507, 1746  
Oliveira, G. P. 713  
Oliveira, J. L. de 1747

- Oliveira, M. R. 242  
 Oliveira, T. S. de 3167  
 Oliver, A. D. 2209  
 Oliver, J. H., Jr. 273, 968  
 Olobo, J. 1085  
 Olson, E. H. 2120  
 Olson, J. K. 375  
 Olsuf'ev, N. G. 2692, 3348  
 Omar, D. 2548  
 Omar, M. S. 147  
 Omelaeva, R. N. 1075  
 Omer, S. M. 3238  
 Önder, F. 1191  
 Ong, K. H. 1657  
 Onishi, O. 1295, 1582  
 Ono, H. 1583, 2665  
 Onwubiko, A. O. 2895  
 Onyang, P. 651, 1085  
 Onyiah, J. A. 1314, 1864  
 Opiyo, E. A. 1316  
 Oquendo, M. Guillen 3078  
 Orakaeva, N. S. 1013  
 Orchard, I. 1182, 2856  
 Orchard, R. D. 2188  
 Orlov, B. N. 307  
 Ortega Gutiérrez, M. 325  
 Ortega, R. 37, 561  
 Orth, R. E. 677  
 Ortiz C., I. 2577  
 Osburn, R. L. 1935, 2739, 3071  
 Oscherov, B. 400  
 Oshman, J. L. 2175  
 Öse, S. 3271  
 O'Shanny, W. J. 2248  
 Oshima, K. 1450  
 Osman, O. M. 1520  
 Osmani, Z. 2879, 3124  
 Osterbur, D. L. 2068  
 Østergaard, P. A. 1426  
 Ostermeyer, E. C. 2722  
 Oswald, A. 2459  
 Oteng, A. K. 1115  
 Otero Colina, G. 1462  
 Otesile, E. B. 47  
 Otieno, L. H. 651, 1085, 1099, 1312  
 Otsuki, K. 880  
 Otta, J. A. 3343  
 Otley, M. L. 2654  
 Otzen, W. 2005  
 Ouchi, T. 727  
 Ouedraogo, M. 433, 2678  
 Ouhelli, H. 2166  
 Overall, W. L. 2205  
 Owaga, M. L. A. 3002  
 Owen, L. G. 1670  
 Owen, W. B. 2615  
 Owor, J. 3326  
 Ozaki, K. 3281  
 Özar, A. İ. 788  
 Özarmagan, G. 519  
 Padbidri, V. S. 3090  
 Padgett, P. D. 1756  
 Padua, L. E. 1228  
 Pac, C. M. 2122  
 Page, T. L. 1162  
 Paine, G. D. 2241  
 Pajot, F. X. 139, 140, 1154, 2969  
 Pakarnseree, L. 2805  
 Pal, R. 2359  
 Palacios-Vargas, J. G. 2243  
 Palička, P. 514  
 Paling, R. W. 2474  
 Pallotti, E. 1331  
 Palma, R. L. 1494  
 Pan, F. C. 819  
 Pan, L. Z. 1526  
 Pan, S. X. 855  
 Panaitescu, D. 980  
 Panchenko, A. B. 1045, 1076  
 Pandare, D. 2637  
 Pandey, V. S. 2166  
 Pandeya, S. N. 2504  
 Pandya, A. P. 2662, 2968  
 Pandya, M. K. 2952  
 Panfilova, I. M. 722, 978  
 Panicker, K. N. 2373, 2621, 2640  
 Pannerer, X. le 223  
 Pant, C. P. 94  
 Paoli, C. de 10  
 Papavasiliou, S. 1576  
 Papp, L. 675, 3016  
 Pardal, J. F. 3115  
 Parham, D. J. 1924  
 Parish, L. C. 348  
 Park, P. O. 1327  
 Parker, G. A. 3050  
 Parker, J. D. 2401  
 Parker, K. L. 2631  
 Parker, R. J. 961  
 Parra G., D. 700, 2218  
 Parrino, J. 2455  
 Parsons, J. 1641  
 Partono, H. F. 1777  
 Parveen, T. 3257  
 Paschke, J. D. 63  
 Pascoe, R. 1439  
 Pascoe, R. R. 3091  
 Pascual Sánchez-Gijón, E. 129  
 Pass, G. 926  
 Passos, G. A. de G., Jr. 2857  
 Passova, O. M. 2146  
 Pasteur, N. 825, 1221, 2104, 2105, 2366, 2877, 2967, 3281  
 Pastoret, P. P. 3  
 Patel, N. 149  
 Patel, N. R. 2030  
 Patil, T. N. 879  
 Pattanayak, S. 624, 2054, 3270  
 Patterson, R. S. 455, 1090  
 Paul, B. S. 750  
 Paul, R. 2177  
 Pauli, G. 1654, 1955  
 Paulian, R. 2529  
 Paulini, E. 2018  
 Paull, N. I. 961  
 Paulov, S. 1011, 3289  
 Paulovová, J. 1011, 3289  
 Pautou, G. 2743  
 Pavlichenko, V. I. 430, 642, 2663, 2978  
 Payneau, A. 320  
 Peacock, A. J. 2995  
 Pearson, A. M. 826, 1546  
 Pearson, J. E. 3149  
 Peck, S. B. 3378  
 Pedersen, R. J. 289  
 Pedreño, J. Sánchez 3308  
 Pedroso, M. C. 2660  
 Peihui, C. 680  
 Peijnenburg, F. H. M. 2157  
 Pelhate, M. 2559  
 Pelikan, P. 2008  
 Pelissero, G. 2014  
 Peloquin, J. J. 3280  
 Pelsue, F. 670  
 Pelsue, F. W. 2113  
 Pelsue, F. W., Jr. 1911  
 Peña, A. Estrada 3419  
 Penev, I. 2542  
 Pengelly, D. H. 2614  
 Penzlin, H. 338  
 Peraçoli, M. T. S. 1588, 1589, 3334  
 Pereguda, T. A. 198  
 Pereira, A. C. B. 1507  
 Pereira, M. de C. 2476  
 Pereira, M. E. A. 2295  
 Peres, C. A. 218  
 Perez, C. 3403  
 Pérez, C., E. 3393  
 Pérez, F. Albala 2850  
 Pérez Rivera, R. A. 3429  
 Pérez Urtiz, T. M. 1129  
 Perié, N. M. 1410, 2225  
 Périères, J. 132, 636, 2052  
 Perišić, S. 3111  
 Perreau, P. 958  
 Persoons, C. J. 2554  
 Perveen, A. 119  
 Pessoa, B. 3199  
 Pesson, R. 3200  
 Pest Infestation Laboratory, Denmark 1479  
 Pétyay, A. F. 1669  
 Peters, W. 90, 2624  
 Petersen, H. D. 2169  
 Petersen, H. del var 2431  
 Petersen, J. J. 377, 2932, 3261  
 Peterson, B. V. 143, 2587  
 Peterson, C. A. 2499  
 Peterson, E. D. 1196  
 Peterson, E. L. 67, 406, 858, 1600  
 Peterson, L. G. 1389  
 Peterson, R. D. 474  
 Petit, G. 59  
 Petralia, R. S. 1770  
 Petrarca, V. 765, 766, 767, 774, 1571  
 Petrelli, G. 768, 2570  
 Petrenko, A. A. 1057  
 Petrescu, S. 75, 2039  
 Parsons, A. D. 926  
 Petrović, M. 3109  
 Petrović, Z. 701  
 Petryshak, A. 548  
 Peus, F. 3340  
 Peyton, E. L. 2070  
 Pfadt, R. E. 2524  
 Pfeiffer, D. G. 226  
 Pfeiffer, H. 515  
 Pfotenhauer, P. 1566, 1567  
 Phang, O. W. 1412  
 Phelps, R. J. 647  
 Philip, R. N. 234, 3065  
 Philippon, B. 1702  
 Phillai, J. S. 107  
 Phillips, D. L. 61  
 Phillips, S. A., Jr. 2203, 2206  
 Phinichpongse, S. 96  
 Piazak, N. 1637  
 Pichon, G. 120, 121, 2589  
 Pickets, L. G. 454  
 Picq, J. J. 1693, 3310  
 Piekarski, G. 534, 1198, 1199  
 Pierdominici, G. 768  
 Piesman, J. 1651  
 Pietra, P. 1370, 1614  
 Pifano C., F. 2577  
 Piff, E. 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932  
 Pilgrim, R. L. C. 1494, 2312  
 Pillai, J. S. 412, 1729, 1833  
 Pillai, M. K. K. 2602, 2603  
 Pilz, R. 748  
 Pimentel, D. 751, 2410  
 Pimley, R. W. 2682  
 Pimm, S. L. 2730  
 Pimprikar, G. D. 191, 3355  
 Pinchin, R. 350, 560, 807, 1507, 1746  
 Pinchuk, L. M. 1077  
 Pinger, F. R. 1790  
 Pinger, R. R. 1789, 2900  
 Pinhão, R. C. 1101  
 Pinheiro, F. P. 2627, 2655, 2658, 2897, 2898, 3224  
 Pinniger, D. B. 1140  
 Pinson, C. K. 481, 1628  
 Pinson, J. L. 1193  
 Pinto Dias, J. C. 3172  
 Pipa, R. L. 550  
 Pipano, F. 944  
 Piper, G. L. 3159  
 Pires, C. A. 1843  
 Pisati, A. 991  
 Pishokha, N. P. 312  
 Pistoia, V. 989, 990  
 Pitariu, T. 980  
 Plapp, F. W. 879  
 Plapp, F. W., Jr. 909, 1365, 3343  
 Platner, G. R. 3372  
 Platts-Mills, T. A. E. 739, 2489, 2492  
 Platzter, E. G. 1227, 1229, 2089, 2916, 3244  
 Plessis, J. L. du 945  
 Pletzen, R. van 2364  
 Plotnikova, L. F. 3399  
 Podboronov, V. M. 2745  
 Podufal, C. Hintze- 783  
 Poehling, H. M. 74, 187  
 Poggio, T. 3043  
 Poinar, G. O., Jr. 1134, 1357, 3320  
 Pokorny, K. S. 3406  
 Polevik, N. L. 2693  
 Politzar, H. 873, 1088, 1323, 1324, 1699, 1875, 1884, 2684  
 Pollack, R. J. 2981  
 Pollock, R. J. 2266  
 Polyakov, D. I. 928  
 Pomonis, J. G. 2277  
 Ponirovskii, E. N. 3307  
 Pont, A. C. 2511  
 Pont, F. le 139, 2969  
 Popov, V. F. 251  
 Popov, V. V. 3083  
 Popova, N. A. 56  
 Popova, P. P. 3084  
 Popovich, A. P. 1078, 2694  
 Porshnyakov, G. A. Mazokhin- 1376  
 Porter, G. N. 643, 2974  
 Portus, M. 284, 1971  
 Posey, K. 425, 1763  
 Pospíšil, L. 897  
 Possani, L. D. 522, 2781  
 Post, D. C. 3375  
 Post, L. O. 230  
 Potgieter, F. T. 950, 3082  
 Pougalan, M. 2560  
 Povalishina, T. P. 1046, 1049  
 Povolný, D. 897  
 Powell, J. R. 126, 399  
 Powell, M. B. 296  
 Powell, P. K. 554  
 Pozo, D. Guevara 3117  
 Pozzessere, S. 767  
 Prado, A. P. do 195, 2268  
 Prasad, R. 3216  
 Prasad, R. S. 2581  
 Prasittisuk, C. 824  
 Pratleng, F. 2148  
 Pratt, G. E. 2009  
 Pratt, M. S. 181  
 Prawel, D. A. 2556  
 Presser, S. B. 1784, 2626  
 Preston, S. 347  
 Prévost, Y. H. 673  
 Price, M. A. 2739  
 Price, P. W. 536, 2308  
 Price, R. D. 31, 33, 1171, 1492, 2849, 2854, 3164  
 Pridantseva, E. A. 56  
 Priestner, T. M. 392, 2353  
 Prigarin, Yu. N. 1013  
 Prillinger, L. 1158  
 Primor, N. 200  
 Pritchard, G. 1811, 3252  
 Prod'hon, J. 120, 121, 2589  
 Proskuryakova, A. M. 2588  
 Prost, A. 147  
 Protodopova, G. V. 1073  
 Prout, T. 3140  
 Prud'hom, J. M. 145  
 Pryor, S. C. 369, 2035, 2940  
 Puccini, V. 764  
 Pudney, M. 1468, 1825  
 Pudtanasirookoon, C. 2132  
 Pulido F., J. 579  
 Pull, J. 94  
 Pull, J. H. 3194  
 Pullan, N. B. 245  
 Pulman, D. A. 1378, 1985  
 Purnell, R. E. 946, 1642, 1649  
 Purnomo 1777  
 Py-Daniel, V. 1846, 2155  
 Pyliotis, N. A. 911  
 Qadri, S. S. H. 528, 1447  
 Qiu, M. H. 418  
 Qu, J. Q. 421  
 Quaglia, R. 989  
 Quattlebaum, E. C. 1687  
 Queensland, Department of Primary Industries 16  
 Queensland, James Cook University 2836  
 Quick, M. P. 3009, 3101  
 Quiles Mora, J. 3308  
 Quillévére, D. 433, 2678  
 Quinlan, R. J. 2680  
 Quintana, J. 1256, 1259  
 Quintero M., M. T. 1465, 2774  
 Quintero, M. T. 1128  
 Quiroz, M. Gutiérrez 352  
 Raadt, P. de 1311  
 Raana, K. 119, 1557, 2938  
 Rab, M. O. Gad El 2192  
 Rab, M. Zaka-ur- 859



## Author Index

- Rabello, E. X. 2970  
 Rabinovich, J. 40, 353  
 Rabinovich, J. E. 3138  
 Rabocheva, E. I. 532  
 Raccaud, J. Schoeller- 1605  
 Rachman, N. J. 1619  
 Rack, G. 1363  
 Radoutcheva, T. S. 250  
 Radovsky, F. J. 275, 922, 2238, 3133  
 Radtke, N. D. 2304  
 Rafael, J. A. 2187, 2874  
 Raghow, R. S. 582  
 Rahalkar, G. W. 2056  
 Rahim, A. A. Abdel 1520  
 Rahim, M. Ataur- 2642  
 Rahman, A. M. Abdel- 2634, 2635, 2636  
 Rahman, S. J. 572, 609, 1264, 1265  
 Rai, K. 2337  
 Rai, K. S. 593, 1547  
 Rajagopalan, P. K. 2600, 3218, 3269  
 Rajavelu, G. 715  
 Rajeeva, A. M. 28  
 Rajula, G. S. 2926  
 Ralley, W. E. 1822  
 Ralph, D. 112  
 Ram, S. M. T. 3093  
 Ramabrahmam, P. 2625  
 Ramalingam, S. 2170, 2359  
 Ramaprasad, K. 2599  
 Ramaswamy, S. B. 2555  
 Rambajan, I. 3317, 3318  
 Ramchurn, R. 344  
 Ramdani, M. 3183  
 Ramesh, A. 3217  
 Ramkaran, A. E. 90  
 Ramos Elorduy de Conconi, J. 1466  
 Ramos, H. da Cunha 2069, 2638  
 Ramos, L. M. Zapatero 243  
 Ramos, M. González- 291  
 Ramoska, W. A. 118, 2892, 3260  
 Ramsamy, M. 444, 3036  
 Ramsay, G. W. 281  
 Ranade, D. R. 1381  
 Ranaivosata, J. 2389  
 Ranasinghe, L. E. 2104  
 Randall, M. 2456  
 Randell, W. F. 2028  
 Randolph, S. E. 274, 2161  
 Rangel, E. F. 2019  
 Rani, P. U. 3124  
 Rao, B. Barhmanad 1447  
 Rao, C. K. 102, 1260, 2057, 2599, 3223  
 Rao, J. 2562  
 Rao, J. S. 2599  
 Rao, K. 2562  
 Rao, K. M. 2623  
 Rao, K. N. A. 2343, 2470  
 Rao, K. S. J. 2783  
 Rao, L. 1007  
 Rao, N. S. K. 923  
 Rao, P. K. 2599  
 Rao, P. Narayan 1914  
 Rao, Y. Subba 607  
 Rapley, P. E. L. 533, 1720  
 Rarotra, J. R. 2748  
 Rasmussen, C. D. 1741  
 Rasnitsyn, S. P. 1934  
 Rastegaev, Yu. M. 442, 654  
 Ratanaworabhan, N. 2822  
 Ratcliffe, B. C. 3379  
 Ratcliffe, N. A. 544  
 Rathburn, C. B., Jr. 371  
 Rathor, H. R. 1541, 1557, 1775, 2915, 2938, 2960  
 Rathore, H. S. 3256  
 Rauchbach, K. 282  
 Rausch, M. 1268  
 Raust, P. 1943  
 Ravishankar, G. A. 3130  
 Ravkin, Yu. S. 1052  
 Rawash, I. A. 1754  
 Ray, A. C. 230  
 Rayburn, J. D. 1118, 1119, 1120, 1121, 3147, 3148  
 Raychaudhuri, D. N. 339  
 Raymond, H. L. 217, 659  
 Raymundo, H. H. 1503  
 Razumova, I. V. 706  
 Read, R. G. 2283  
 Readshaw, J. L. 1369  
 Ready, P. D. 633  
 Reagan, T. E. 2209  
 Reagor, J. C. 230  
 Rebholtz, C. 160  
 Rechav, Y. 2214  
 Redding-Coates, T. A. 3272  
 Reddy, A. B. 2837  
 Reddy, G. R. 2784  
 Reddy, K. R. 2562  
 Reddy, M. V. 2452  
 Reddy, M. Vikram 1595  
 Reddy, S. R. 3213  
 Reddy, T. Gopalakrishna 2494  
 Reeves, W. C. 2080, 2082  
 Refaii, A. H. El- 2756, 3374  
 Regalene, G. 3399  
 Rege, M. S. 2794  
 Řeháček, J. 271, 924, 3399  
 Rehim, L. Abdel- 366  
 Reich, C. H. 2217  
 Reichardt, W. 682, 3043  
 Reid, J. A. 108, 1799  
 Reiersen, D. A. 3187  
 Reigel, F. 113, 1568, 1569  
 Reinecke, J. P. 1342  
 Reinert, J. F. 2948  
 Reisen, W. K. 395, 1557, 1775, 2938, 3255, 3257, 3259  
 Reisman, R. E. 1386, 1630, 1634  
 Reiter, I. 934  
 Reiter, P. 854  
 Rejesus, B. Morallo- 2838, 3127  
 Rékási, J. 2012  
 Remington, M. 2976  
 Remington, M. P. 2400, 2977  
 Ren, S. M. 567  
 Renapurkar, D. M. 1561  
 Renard, J. 1669  
 Renaudet, J. 2038  
 Rensburg, L. van 3082  
 Repkina, L. V. 1934  
 Research Branch, Agriculture Canada 2510  
 Resh, V. H. 1782, 2114, 3133  
 Reshetnikov, I. A. 716, 2732  
 Restifo, R. A. 3251  
 Rettich, F. 387, 401, 828, 2942  
 Retzer, H. J. 1601, 2273  
 Reyna Robles, R. 1126, 1460  
 Reynolds, D. G. 1825  
 Reynolds, I. F. 313  
 Reynolds, S. E. 1159, 1337  
 Reynouard, F. 697  
 Reznik, P. A. 1047  
 Rhee, K. S. 909  
 Riad, Z. M. 2469, 2646  
 Ribbeck, R. 2191  
 Ribeiro, H. 2069, 2638  
 Ribeiro, J. M. C. 354, 2295, 3171  
 Ribí, W. 3041  
 Richard-LeNoble, D. 861  
 Richards, O. W. 691  
 Richardson, B. B. 576, 834, 843, 2896  
 Richardson, M. A. 582  
 Ricklefs, R. E. 2282  
 Rider, G. 2396  
 Riding, G. A. 960, 1395  
 Ridsdill Smith, T. J. 1924  
 Rieb, J. P. 1574, 3299  
 Riedel, B. 1838  
 Riedel, H. Sollers- 3284  
 Rieger, M. 1249  
 Riegert, P. W. 2539  
 Rietschel, G. 443, 1336  
 Rifaat, M. A. 3293  
 Ríha, J. 3230  
 Rijckaert, G. 3094  
 Riley, J. 2500  
 Riner, J. C. 998, 2488  
 Ring, B. 3051  
 Rioux, J. A. 132, 133, 134, 368, 636, 2052, 2148, 2149, 2967  
 Riper, C. van, III 1796  
 Ristic, M. 2221  
 Ritchie, S. A. 385  
 Ritzmann, R. E. 1166  
 Rivera, R. A. Pérez 3429  
 Rivière, F. 120, 121, 2589  
 Rivoecchi, L. 9, 10, 2392, 3063  
 Rizvi, S. A. 888  
 Ro, Y. M. 1958, 2763  
 Robaux, P. 517  
 Robbins, R. G. 2586  
 Robbins, W. E. 998, 2488  
 Robert, V. 2637  
 Roberts, C. J. 2842  
 Roberts, D. R. 2657, 2658  
 Roberts, D. W. 2258, 2517  
 Roberts, M. J. 1319  
 Roberts, R. 1753  
 Roberts, R. H. 1193, 1842, 3059  
 Robertson, A. K. 104  
 Robertson, K. 1341  
 Robertson, R. 181  
 Robertson, W. D. 939  
 Robin, Y. 704, 1244, 1411, 1826  
 Robinson, D. M. 1185  
 Robinson, W. H. 554  
 Robles, R. Reyna 1126, 1460  
 Rocca, J. 3058  
 Rocha e Silva, E. O. da 812, 3173  
 Rochat, H. 742  
 Rochers, B. des 2086, 2087  
 Rockett, C. L. 1212  
 Rodhain, F. 833, 2389, 3392  
 Rodrigues da Silva, G. 3172  
 Rodrigues, F. M. 3275, 3276  
 Rodrigues, V. L. C. C. 808  
 Rodríguez, D. 40  
 Rodríguez García, F. 3308  
 Rodríguez, J. A. Rodríguez 129  
 Rodríguez, J. G. 2834  
 Rodríguez, J. Romero 3117  
 Rodríguez, O. 291  
 Rodríguez Rodríguez, J. A. 129  
 Roebuck, A. S. 658  
 Roelofs, W. L. 1686, 1983  
 Rogers, A. J. 3352  
 Rogers, D. J. 1097, 2161  
 Rogers, R. J. 949  
 Rognes, K. 881, 1907, 2408  
 Rogoff, M. H. 1540  
 Rogoff, W. M. 2188, 2447, 2700  
 Rogués, G. 2213, 2233  
 Rojas, A. 3176  
 Rojewski, C. 3054  
 Roman, B. 2982  
 Romano Mechulan, M. 1764  
 Romasheva, L. F. 1048  
 Rombach, M. C. 1410  
 Romero Rodríguez, J. 3117  
 Romney, S. V. 381  
 Ronald, N. C. 2226  
 Rong, Y. L. 418, 865  
 Rongjing, J. 407  
 Root, F. M. 1256  
 Rosa, A. P. A. T. da 2627, 2655, 2656, 2898, 3224  
 Rosa, J. F. S. T. da 2655, 2898, 3224  
 Rosa, J. F. Travassos da 2656  
 Rosas Costa, J. A. 1149  
 Rosay, B. 3201, 3212  
 Rose, D. L. 3081  
 Rose, H. A. 1371, 2712  
 Rosen, L. 847, 1784, 2883  
 Rosenberg, G. 967  
 Rosenberg, L. J. 1850  
 Rosenberg, R. 848  
 Rosenthal, M. D. 3404  
 Rosicki, B. 1560  
 Roslavtseva, S. A. 198, 1893  
 Ross, D. A. 1535  
 Ross, D. H. 2667  
 Ross Institute of Tropical Hygiene 840  
 Ross, K. 303  
 Ross, Q. E. 577, 1234  
 Ros'tsishevskaya, M. 548  
 Roth, L. 296  
 Rothschild, M. 232  
 Rothschild, N. C. 2305  
 Rothstein, M. 1608  
 Rougement, A. 147  
 Rougon, C. 3376  
 Rougon, D. 3376  
 Roussel, G. 758  
 Rowcliffe, C. 2403  
 Rowe, S. F. 915  
 Rowley, A. F. 544  
 Rowley, W. A. 385  
 Roy, N. K. 2506  
 Roy, R. G. 2054, 3270  
 Roy, Y. P. 1260  
 Roychowdhury, S. P. 101  
 Rozhon, E. J. 2630  
 Rubini, P. G. 665  
 Rubio, Y. Domínguez 1466  
 Rubtsov, I. A. 424, 2154, 2693, 2695  
 Rubtsova, L. I. 261  
 Ruckert, E. 2163  
 Rudin, W. 1527  
 Rudnick, A. 1245, 1246  
 Rudolph, D. 926  
 Ruebush, T. K., II 3397  
 Ruegg, R. P. 3175  
 Ruff, J. 904, 3352  
 Ruffli, T. 803, 820, 1148, 1174, 3215  
 Rumpf, T. 1187, 2303  
 Runstrom, E. S. 2841  
 Rupes, V. 1639  
 Ruprah, N. S. 32  
 Rush, W. A. 563, 1749  
 Rusinov, A. A. 2845  
 Russel, S. 102  
 Russell-Smith, A. 2163  
 Russo, P. K. 3182  
 Rust, M. K. 3187  
 Ruther, H. 564  
 Rutledge, L. C. 1525, 2347, 3249  
 Rutter, I. 2509  
 Rutti, B. 2740  
 Rutz, D. A. 374, 1345, 1814  
 Ruza, L. O. 1445  
 Ryan, K. J. 169  
 Ryan, L. 150, 1095, 2983  
 Ryazantseva, A. E. 1079  
 Ryba, J. 362  
 Rybalchenko, V. M. 1757  
 Ryl'tseva, E. V. 1049, 2732  
 Saadi, S. H. Al- 2917  
 Saba, F. 1712, 1713  
 Sabatini, A. 765, 766, 770  
 Sabatini, M. S. 396, 2629  
 Sabrosky, C. W. 1832  
 Sánchez-Covisa, A. 129  
 Sadekova, L. Kh. 1021, 1050, 2571  
 Sadoventko, E. V. 1061  
 Sadovskaia, N. P. 1056  
 Sadykhov, I. A. 1051  
 Sadykov, V. G. 3307  
 Saetta, M. 992  
 Saf'yanova, V. M. 867  
 Sagdieva, P. D. 3389  
 Sage, B. 125, 2595  
 Saggi, B. 1959  
 Saguez, F. Beauconu- 2674  
 Saguna, S. G. 1808  
 Saha, G. N. 227  
 Sahai, R. 3223  
 Sahu, H. 103  
 Said, A. El 497  
 Saikia, H. C. 2623  
 Saikku, P. 702  
 Saini, R. K. 2999  
 St. George, T. D. 862, 1253  
 St. Leger, A. S. 1975  
 Saito, K. 880  
 Sakai, R. K. 119, 372, 595, 1557, 2377, 2938  
 Sakai-Wada, A. 790  
 Sakamoto, C. J. 3422  
 Sakla, A. A. 2475

- Salamanna, G. 896  
 Salandra, M. la 764  
 Salaun, J. J. 393, 1411, 1637, 1826, 2037, 2038  
 Salazar Schettino, P. M. 352  
 Saleh, R. 1605  
 Salem, S. A. 366  
 Sales, S. 1326, 1714, 2361  
 Salit, A. M. 2475  
 Salkin, I. F. 2240  
 Salleh, M. B. Mohd- 197  
 Salmon, J. 512  
 Sal'nikov, V. G. 1038  
 Saluzzo, J. F. 1411, 2066, 3295  
 Samarawickrema, W. A. 1205, 1206  
 Samba, E. M. 2037  
 Sambhavaphol, W. 2814  
 Samnotra, K. G. 624  
 Samra, M. T. Abu- 777, 3418  
 Samšić, K. 514  
 Samuel, W. M. 556  
 Samurov, M. A. 815  
 Sanabria, M. E. Solano 2138  
 Sánchez Acedo, C. 340, 3419  
 Sánchez-Covisa Villa, A. 129  
 Sánchez Diaz, B. 5, 6, 561  
 Sánchez-Gijón, E. Pascual 129  
 Sánchez Pedreño, J. 3308  
 Sandeman, D. C. 459  
 Sangvaranond, A. 2806  
 Santagata, V. 9  
 Santambrogio, A. 566  
 Santis, L. de 555  
 Santokh Singh 3014  
 Santos, C. E. 350  
 Santos Dias, J. A. Travassos 1404  
 Santos, I. dos 2139  
 Santos, J. L. F. 2575, 2970  
 Santos, J. M. M. 1768  
 Santos, M. A. V. 3224  
 Santos, R. A. S. 2780  
 Santrach, P. J. 1389  
 Sanyal, R. K. 1260, 1261, 1262  
 Sanyang, B. 1305  
 Sanyang, B. J. 1298, 1299  
 Sanyang, Y. 393  
 Sapegina, V. F. 1052, 3184  
 Sara, M. 896  
 Sarhan, M. E. 574, 1801  
 Sarkar, A. 23, 1681  
 Sarkar, J. K. 2620  
 Sarkar, P. K. 2623  
 Saroso, J. S. 2801  
 Sarr, M. 704  
 Sartabaev, S. K. 1033  
 Sarwat, M. A. 3293  
 Sasaki, H. 3023  
 Sasaki, O. 2908  
 Sasao, F. 3286  
 Sato, S. 603, 3271  
 Sattelle, D. B. 1159, 1998  
 Sauer, J. R. 1644  
 Saul, S. H. 1234  
 Saunders, D. S. 1600, 2278  
 Saunders, J. P. 1412  
 Savage, E. A. 2292  
 Savage, K. E. 846, 1816, 3236  
 Savel'ev, V. N. 1186  
 Savignac, R. 1818, 2611  
 Saviolo, N. 823, 2179  
 Sawadogo, R. 2672  
 Sawaf, B. M. El- 478, 2720  
 Sawayama, T. 85  
 Sawy, M. F. El- 562  
 Saxena, A. K. 1173, 2011, 2568, 2852  
 Saxena, B. P. 1755  
 Saxena, R. 2421  
 Saxena, S. C. 1165  
 Sayle, J. D. 1439  
 Sazonova, O. N. 3264  
 Schaal, A. W. J. van der 201  
 Schaefer, C. H. 2088, 2109, 2112, 3013  
 Schaefer, M. 2005  
 Schaefer, T. 1650  
 Schaeffer, A. E. 234  
 Schäl, C. 26  
 Schalkwyk, D. J. van 621  
 Scharf, W. C. 2585  
 Scheefers-Borchel, U. 1838  
 Scheefers, H. 1838  
 Schein, E. 272, 499, 709  
 Scheller, K. 3354  
 Schembri, S. P. 1384  
 Schenone, H. 3176  
 Scherer, W. F. 1828  
 Schettino, P. M. Salazar 352  
 Schiefer, B. A. 3234, 3235  
 Schlee, D. 2511  
 Schleger, A. V. 2471, 3072, 3073  
 Schlein, Y. 874, 2332, 3074, 3324, 3325  
 Schlotthauer, J. C. 600  
 Schlunegger, B. 2740  
 Schmidt, B. A. 2552  
 Schmidt, C. D. 3010  
 Schmidt, G. 545  
 Schmidt, H. 690  
 Schmidt, J. O. 231, 2205  
 Schmidt, S. P. 1227, 1229  
 Schmidtmann, E. T. 417, 2965, 3301  
 Schneider, R. 2252  
 Schnetter, W. 1250  
 Schnieder, I. 1470  
 Schoeller-Raccaud, J. 1605  
 Schoenenberger, M. C. 842  
 Schoenfeld, F. J. 381  
 Schofield, C. J. 2293, 2294  
 Scholefield, P. J. 1811, 3252  
 Scholten, T. 155  
 Scholtz, C. H. 2528  
 Schotz, M. 263  
 Schreck, C. E. 425, 1525, 1763, 1813, 1937  
 Schreiner, I. 751  
 Schröder, J. 1645  
 Schröder, P. 1293, 1294  
 Schultka, H. 3350, 3351  
 Schumacher, E. 780  
 Schwab, R. G. 2002  
 Schwan, T. G. 1513, 3245  
 Schwan, V. R. H. 1513  
 Schwartz, H. J. 2455  
 Schwartz, L. M. 3126  
 Schwarz, M. 649, 2679, 2700  
 Scirocchi, A. 657, 771, 772, 773  
 Scoles, G. A. 2981  
 Scorza, J. V. 326, 632  
 Scozzari, R. 774, 1571  
 Scrivenor, Sir T. 752  
 Searle, R. J. G. 1444  
 Seawright, A. A. 2766  
 Seawright, J. A. 450, 1808, 3232, 3370  
 Sebae, A. H. El- 761  
 Sebastian, A. 1247  
 Sebastien, R. J. 1285, 2980  
 Séchan, Y. 146  
 Secretary for Health, Zimbabwe 2006  
 Seethaler, H. 1969  
 Segura, E. L. 351  
 Seifert, A. M. 596  
 Seifert, R. P. 1222, 2362  
 Sein, M. M. 1247  
 Seith, M. E. 2535  
 Sékétéli, A. 2672  
 Sekeyová, M. 3069  
 Sekhon, S. S. 1180  
 Sekla, L. H. 1809  
 Self, L. S. 115  
 Sellers, R. F. 328  
 Sellin, E. 873, 1088, 1315, 1699, 1884, 2684  
 Semenov, P. V. 3335  
 Sempala, S. D. K. 1112  
 Semushin, R. D. 1054, 1055, 1586  
 Sen, S. K. 1152  
 Seng, C. M. 413  
 Sengupta, D. N. 3417  
 Seni, A. 624  
 Seregeg, I. G. 1554  
 Serna de Esteban, C. J. de la 524  
 Service, M. W. 64, 97, 539, 1849  
 Servin V., R. 1127  
 Sethi, M. S. 795, 2748  
 Seureau, C. 692  
 Sevast'yanov, V. D. 1053  
 Sevilla, V. Basaca- 83, 3221  
 Seward, R. M. 3359  
 Seye, M. 1300  
 Seymour, K. G. 2829  
 Shadduck, J. A. 747, 1785  
 Shadebi, A. M. Al- 3086  
 Shafiq, S. A. 1351  
 Shah, I. H. 617  
 Shahid, A. A. 3257  
 Shakerzinova, S. G. 1013  
 Shakoori, A. R. 3356  
 Shakuntala, K. 3213  
 Shalaby, F. M. 3374  
 Shalidybina, E. S. 1081  
 Shali, A. K. 2917  
 Shanahan, G. J. 168  
 Shanbaky, N. M. 1397  
 Shankar, V. 2504  
 Sharma, G. P. 1558  
 Sharma, R. K. 2421  
 Sharma, S. K. 572, 609, 2601  
 Sharma, S. P. 2599  
 Sharma, V. D. 795  
 Sharma, V. P. 2887, 3222  
 Sharrad, R. D. 963  
 Shashina, N. I. 717  
 Shatov, K. S. 3163  
 Shatrov, A. B. 507, 1674  
 Shaw, J. H. 1118, 1119, 1120, 1121, 3147, 3148  
 Shaw, J. J. 2299  
 Shaw, M. R. 2696  
 Shcherbak, G. I. 1006  
 Shcherbak, V. B. 2031  
 Shcherbak, V. P. 445, 1065  
 Shcherbakov, A. S. 1718  
 Shcherban, Z. P. 1065, 2031  
 Shcherbinina, O. Kh. 1636  
 Sheffer, A. L. 2455  
 Shelden, G. P. 2632  
 Shelley, A. J. 870, 1580, 2155, 2399  
 Shelley, B. K. 441  
 Shelley, M. W. 2713  
 Shemanchuk, J. A. 1237, 1286, 1287, 1288  
 Shen, C. P. 516  
 Shepard, G. L. 2007  
 Shepard, M. 751  
 Shepherd, R. 2323  
 Sheppard, C. 1367, 2440, 2699  
 Sheppard, R. G. 2264  
 Sheremet, V. P. 402, 1025, 2591  
 Sherif, A. F. El- 562  
 Sherlock, I. A. 2296, 3167  
 Sherlok, I. A. 1137  
 Sherry, J. P. 1902  
 Shestakov, V. I. 1760  
 Shevchenko, A. K. 1062  
 Shewell, G. E. 2587  
 Shi, M. H. 1526  
 Shibazaki, S. 2204  
 Shiels, I. A. 949  
 Shikuma, S. 2108  
 Shimkina, M. A. 1063  
 Shimoda, T. 2450  
 Shirai, A. 1973  
 Shiraji, R. 2907  
 Shisler, J. K. 3207  
 Shockley, P. 1641  
 Shope, R. E. 2630, 2949  
 Shornikov, V. V. 1718  
 Short, N. J. 1638  
 Shoukrey, N. M. 2514  
 Shoukry, A. 477, 578  
 Shplistezer, Kh. 2691  
 Shriner, R. B. 3406  
 Shroyer, D. A. 847, 1784, 2134  
 Shukla, G. S. 885, 3365  
 Shumakovich, E. E. 3053  
 Shuspanova, N. F. 1064  
 Shuttleworth, A. E. 3338  
 Sichinava, Sh. G. 2346  
 Siddiqui, T. F. 3255  
 Sidky, H. A. 366, 2646, 2755  
 Sidky, H. S. A. 2469  
 Sidorov, V. E. 3070  
 Siebenaler, A. J. 3362  
 Siemicki, R. 1578  
 Sighamony, S. 2879  
 Sigit, S. H. 2802  
 Silard, R. 980  
 Silva de Oliveira, T. 3167  
 Silva, E. O. da Rocha e 812, 3173  
 Silva, G. R. da 3172  
 Silva Mattos, S. da 2049, 2072  
 Silva Passos, G. A. da, Jr. 2857  
 Silveira, A. C. 811  
 Silverman, J. 3187  
 Silverstein, R. M. 3404  
 Simbolotti, P. 2461  
 Simco, J. S. 2433  
 Simetskiĭ, M. A. 728  
 Simkin, J. 1087  
 Simmons, J. R. 3086  
 Simmons, K. R. 2395  
 Simonová, V. 362  
 Simpson, D. I. H. 1641, 1825, 2037  
 Simpson, M. G. 68  
 Sinclair, A. N. 183  
 Sinclair, D. F. 1903  
 Sinégre, G. 55, 69, 93, 580, 581, 1709, 1710, 1711, 2886, 3266, 3296, 3297, 3298  
 Singer, S. 1537, 1572, 1785  
 Singh, G. J. P. 332, 2010  
 Singh, K. 3018  
 Singh, P. B. 3276  
 Singh, R. N. 885, 3365  
 Singh, S. 3014  
 Singh, S. P. 795, 1490, 2374, 3294  
 Singh, S. V. 458, 674, 1622  
 Singh, Y. N. 655  
 Singvi, P. M. 1633  
 Sinnary, K. El- 585, 1841  
 Sinsko, M. J. 2040, 2900  
 Sirigu, G. 71  
 Sirivanakarn, S. 109, 583, 584  
 Sirouzu, H. 1423  
 Sirrenberg, W. 1014  
 Sissom, W. D. 1008  
 Siti Aminah, N. 1554, 1555, 1556  
 Sitnikova, L. G. 994  
 Sittig, M. 2787  
 Sivasubramanian, P. 1615, 2449  
 Sivkov, G. S. 3331  
 Sixl-Voigt, B. 928, 932  
 Sixl, W. 928, 930  
 Sizaret, P. 2779  
 Sjogren, R. D. 415, 1804, 2095, 3209  
 Skaer, H. B. 1159  
 Skaife, S. H. 775  
 Skalon, O. I. 2870  
 Skinner, J. C. 576, 834, 2896  
 Skinner, W. A. 1525  
 Skirkevičius, A. V. 541  
 Skirkyavichyus, A. V. 541  
 Skripka, L. I. 1056  
 Skrynin, E. M. 1759  
 Skvortsova, I. V. 1893  
 Slaff, M. 3292  
 Slater, A. J. 796, 1737  
 Sleeman, D. P. 2182  
 Slifer, E. H. 1180, 1517  
 Slingenbergh, J. 521  
 Slooff, R. 2051  
 Slor, H. 3051  
 Smies, M. 1334, 2157  
 Smiley, R. L. 3421  
 Smirnova, O. I. 928  
 Smit, F. G. A. M. 2329, 2583  
 Smith, A. Russell- 2163  
 Smith, C. 967  
 Smith, C. R. 2319  
 Smith, D. 425, 1763  
 Smith, D. H. 1641  
 Smith, D. S. 1725  
 Smith, E. B. 2006  
 Smith, G. C. 44, 563  
 Smith, I. R. 2632



## Author Index

- Smith, J. J. B. 1509  
 Smith, J. M. M. 219  
 Smith, J. N. 546  
 Smith, K. G. V. 2183  
 Smith, N. 425  
 Smith, P. H. 2435  
 Smith, R. B. 838  
 Smith, R. D. 2221  
 Smith, R. K. 333  
 Smith, R. L. 303  
 Smith, S. K. 27  
 Smith, S. M. 2044  
 Smith, T. A. 3241  
 Smith, T. J. R. 1924  
 Smith, V. W. 2142  
 Smola, U. 2714  
 Smolina, N. A. 2592  
 Sneller, V. P. 2608  
 Snoddy, E. L. 1937  
 Snodgrass, R. E. 2827  
 Snow, J. W. 457, 2169, 2429, 2434, 3362  
 Snow, W. F. 1317, 1863  
 Snowdon, W. A. 2652  
 Snyder, G. K. 1488  
 Soares Barata, J. M. 2575  
 Sobrero, L. 11, 3064  
 Sociedad Mexicana de Entomología 1122, 1457  
 Società Italiana di Etologia 821  
 Società Italiana di Parassitologia 8, 763  
 Society of Chemical Industry 1433  
 Soei, K. I. 2865  
 Sofronić, A. 3111  
 Sohal, R. S. 460, 2172  
 Sokolov, V. D. 1718  
 Sokolova, E. Ya. 1718  
 Sokolova, L. V. 404  
 Solano Sanabria, M. E. 2138  
 Solarz, N. 1506  
 Soliman, S. A. 761  
 Sollers-Riedel, H. 3284  
 Solomon, L. 921  
 Solukha, B. V. 1211  
 Soman, R. S. 3275, 3276  
 Sonenshine, D. E. 711, 1407, 3066, 3402, 3404  
 Song, J. Y. 3100  
 Song, W. J. 2604  
 Soni, K. G. 1558  
 Sonnet, P. F. 2700  
 Soranzo, L. 1592  
 Soriguer, R. C. 2869  
 Sorokina, L. Ya. 1043  
 Sosnina, E. F. 341, 343, 993, 2571  
 South African Institute for Medical Research 1478  
 Southern, D. I. 148  
 Southwood, T. R. E. 760  
 Souza Lopes, O. de 2949  
 Souza, M. C. M. de 1259  
 Spackman, E. W. 2524, 2525  
 Spain, A. V. 1903, 3033  
 Sparks, T. C. 2795  
 Spates, G. 2705  
 Spates, G. E. 892, 2437, 2438  
 Späth, P. 1568  
 Späth, P. J. 113, 114, 1566, 1567  
 Speight, B. 527  
 Spencer, J. P. 1133, 2429  
 Spencer, M. 1771  
 Spicka, E. J. 1970, 3145  
 Spickert, C. 967  
 Spielberger, U. 1329, 1330  
 Spielman, A. 1651, 2062  
 Spielman, J. M. 967  
 Spirina, T. A. 1893  
 Spiro-Kern, A. 2075  
 Spitalier-Kaveh, H. 59  
 Splisteser, H. 1480  
 Spradbery, J. P. 663  
 Squires, E. J. 1641  
 Sreenivasan, M. A. 2697  
 Sreng, L. 337, 784  
 Srihongse, S. 3246  
 Srinivasan, A. 188, 903  
 Srinivasan, M. N. 2374, 3294  
 Srinivasan, M. V. 2193  
 Srivastava, A. 798  
 Srivastava, H. C. 2352  
 Srivastava, L. K. 552  
 Srivastava, U. S. 458, 674, 1622  
 Staak, C. 3322  
 Staal, G. B. 1442  
 Stackiw, W. 1809  
 Stafford, E. E. 2810  
 Stamford, S. 1181  
 Stammer, G. 3026  
 Standaert, J. Y. 2884  
 Standfast, H. A. 1253, 3303  
 Stanley, P. I. 3009  
 Starcke, H. 2305  
 Stark, H. E. 1750  
 Stark, W. S. 1615  
 Starozhitskaya, G. S. 571, 1518  
 Starratt, A. N. 1487  
 Stechmann, D. H. 468  
 Steel, C. G. H. 2856, 3175  
 Steele, J. E. 336  
 Steer, B. D. 235  
 Steere, A. C. 269  
 Stefan, P. 190  
 Steffan, W. A. 1210, 1241, 2124, 2943, 3139  
 Stegeman, R. Brieze- 533, 1720  
 Steger, R. 1386  
 Stegnij, V. N. 1523, 2356  
 Stehlik, M. 2451  
 Stein, W. 1599  
 Steiner, A. 2177  
 Steiner, W. W. M. 2068  
 Steinmann, H. 2512  
 Stella, E. 11, 3062  
 Stendel, W. 504, 1406  
 Stenton-Dozey, J. 2439  
 Stephen, S. 2343, 2470  
 Sternburg, J. G. 3123  
 Stetsenko, M. M. 867  
 Steward, G. A. 986, 987  
 Stewart, K. R. 2585  
 Stewart, N. P. 3088  
 Steyskal, G. C. 677  
 Stiehl, U. 2191  
 Stiles, B. 63  
 Still, W. C. 2553, 2554  
 Stiller, D. 275  
 Stoaks, R. D. 2124, 3430  
 Stockmann, R. 743  
 Stoehr, T. 1782  
 Stoffolano, J. G., Jr. 185  
 Stoilova, B. Zakhariyeva- 1385  
 Stojanović, Z. 3109  
 Stokes, D. R. 794  
 Stollar, V. 1834, 1835  
 Stone, W. B. 2240  
 Storgårds, K. 1673  
 Strand, R. J. 3377  
 Stratigos, J. 1576  
 Strausfeld, N. J. 3143  
 Streett, D. A. 112  
 Strelkova, M. V. 2146  
 Strickman, D. 2041, 3242  
 Strijbosch, H. 222  
 Strinadkin, P. S. 740  
 Stringer, C. E. 2725  
 Stuart, B. P. 914  
 Stünzner, D. 928  
 Stup, J. L. 3234, 3235  
 Stupin, V. I. 1548  
 Stusser, F. 1837  
 Stutterheim, C. J. 1643, 2468  
 Stutterheim, I. M. 2468  
 Styczyńska, B. 1015  
 Styles, P. D. 2719  
 Suárez, M. F. 3227  
 Subba Rao, Y. 607  
 Subbarao, S. K. 2887, 3222  
 Subhashini, K. 1164  
 Sublette, J. E. 1252  
 Subra, R. 398  
 Subrahmanyam, D. 2625  
 Subramanian 1522  
 Subramoniam, A. 2375  
 Sucharit, S. 2945  
 Suchkharoen, S. 221  
 Sudomo, M. 565, 1190  
 Sugar Planters' Association, Hawaii 1802  
 Sukaeri S. 1961  
 Sukhova, M. N. 2572  
 Sulaiman, I. 1786  
 Sulianti Saroso, J. 2801  
 Sultanov, M. A. 316  
 Summers, K. M. 192, 2195  
 Sun, C. N. 2924  
 Sundaram, R. M. 2599  
 Super, M. 621  
 Sur, S. 1845  
 Sureau, P. 1637, 2211, 2758  
 Surgeoner, G. A. 1742, 1743, 1822, 1915, 2060, 2064, 2614  
 Suri, K. A. 1755  
 Suri, O. P. 1755  
 Suroso, T. 1554  
 Sustriayu, N. 565, 817, 1190, 1963, 3188  
 Sutcliffe, J. 1578  
 Sutherland, B. 1610  
 Sutherst, R. W. 928, 3079  
 Sutil O., E. 2061  
 Suto, C. 22, 547  
 Sutton, J. L. 1930  
 Suvorova, L. G. 977  
 Suya, T. B. 2048  
 Suzuki, A. 1446  
 Suzuki, H. 2230  
 Suzuki, T. 288, 983, 1423  
 Suzuki, Y. 1441  
 Suzzoni-Blatger, J. 652  
 Sveshnikova, N. A. 3307  
 Sviderskiĭ, V. L. 1486  
 Swaine, C. D. 1776  
 Swarup, H. 3256  
 Sweeney, A. W. 1552  
 Swiderski, Z. 497  
 Swiss Society of Microbiology 1565  
 Syaduk, V. F. 1380  
 Sylvestre, N. K. 3377  
 Szabó, I. 2027, 2334  
 Stewart, G. A. 986, 987  
 Szymański, S. 238  
 Tabachnik, W. 399, 2630  
 Tabachnik, W. J. 126  
 Tabusa, R. S. 1802  
 Tachikawa, T. 3085  
 Tăcu, V. 75  
 Tada, I. 1584  
 Tadano, T. 379, 1787, 2905  
 Tadei, W. P. 2899  
 Tadmowski, T. M. 922  
 Taggi, F. 768, 2570  
 Takafuji, K. 603  
 Takahashi, M. 886, 2951  
 Takahashi, R. M. 79, 2925  
 Takahashi, S. 785  
 Takahashi, S. Y. 1734  
 Takaoka, H. 144  
 Takaoka, M. 727, 3097  
 Takayanagi, H. 1167, 2540  
 Takigawa, T. 1988  
 Takken, W. 151, 438, 439, 1098, 1105, 2158, 2402, 3323  
 Tal'drik, A. A. 1718  
 Talybov, A. N. 355, 356, 969, 970, 2579  
 Tamar, D. Ben- 1087  
 Tamarina, N. A. 594  
 Tamura, S. 1446  
 Tanaka, I. 1584, 1585, 3312  
 Tang, Z. H. 2604  
 Tannahill, F. H. 457, 2169, 2434  
 Tanskul, P. 2809  
 Tao, K. H. 2246  
 Tapia, A. Martínez y 1463  
 Tapley, R. G. 1145, 2920  
 Taranik, K. T. 1057, 1074  
 Tarasenko, A. B. 3390  
 Tarasevich, I. V. 3399  
 Targa, H. J. 218  
 Tarimo, C. S. 1331, 1871  
 Tarras, M. S. 794  
 Tat, A. L. 519  
 Tavil, N. W. 1771  
 Tawfik, M. F. S. 3344, 3345  
 Tay, J. 352  
 Taylor, A. E. R. 1335  
 Taylor, A. M. 2162  
 Taylor, B. W. 622  
 Taylor, P. 1512  
 Taylor, S. A. 2074, 2914, 2944  
 Taylor, S. M. 946  
 Taze, Y. 873, 1088, 1315, 1323, 1324, 1699  
 Teasley, M. 2328  
 Techasena, S. 2815  
 Tej Singh 1175  
 Telford, S. R. 1962  
 Telford, S. R., Jr. 2478, 2479, 2775  
 Temizer, A. 3410  
 Ten Houten, A. 1554, 1555, 1556  
 Tendeiro, J. 1495, 2566  
 Teng, B. 3099  
 Teng, K. F. 265, 972, 973, 1497  
 Tenorio, J. M. 922  
 Tenquist, J. D. 1409  
 Teo Leng Hong 2816, 2817  
 Teodorescu, I. 453  
 Teplykh, V. S. 356  
 Terauds, A. 533, 1720  
 Teren, T. 1777  
 Terkin, I. F. 3330  
 Terracina, L. 3278  
 Terriere, L. C. 1371, 2712  
 Terteryan, A. E. 676, 3042  
 Terwedow, H. A. 3240  
 Tesh, R. B. 589, 844, 1773, 2134, 2628  
 Tešić, O. 3111  
 Teskey, H. J. 2587  
 Tessier, C. 1818, 2958  
 Thakare, V. K. 898  
 Thanalukshumi, P. 513  
 Thatcher, D. R. 2192  
 Theis, J. H. 266, 267  
 Theobald, F. V. 108  
 Thevasagayam, E. S. 598  
 Thierry, R. 1654, 1955  
 Thomas, A. K. 1790  
 Thomas, A. W. 2197  
 Thomas, C. 2581  
 Thomas, H. H. 720  
 Thomas, P. J. 2788  
 Thomé, J. P. 225  
 Thompson, G. D. 256, 494, 975, 1640, 1935, 2739, 3071  
 Thompson, J. L. Cloudsley- 1723  
 Thompson, J. M. 2167, 3367  
 Thompson, K. C. 2466  
 Thompson, M. J. 2488  
 Thompson, P. H. 906, 907, 2167, 2431  
 Thompson, R. C. A. 3104  
 Thompson, T. 751  
 Thomsen, E. 2704  
 Thornhill, R. 212  
 Thornhill, R. A. 332, 2010  
 Thorpe, A. 887, 2711  
 Thu, M. M. 1247  
 Tiam, H. 1304  
 Tibayrenc, M. 41, 53, 140  
 Tidwell, M. A. 638, 2156  
 Tieben, G. L. 509  
 Tika Ram, S. M. 3093  
 Tikhomirova, V. A. 686  
 Tikku, K. 1755  
 Tilkin, J. 1847  
 Till, W. M. 302  
 Tillyard, R. J. 3151  
 Tilmans, J. 1740  
 Timbal, J. 3200  
 Timchenko, G. A. 312  
 Timischl, W. 1106, 2985  
 Timisjärvi, J. 3008  
 Timm, R. M. 33  
 Timmer, J. 449  
 Timms, S. 2481, 2482  
 Timoney, P. J. 712  
 Tinelli, R. 2606  
 Tinker, M. E. 116  
 Tinsley, T. W. 525  
 Tipker, J. 1449  
 Tipton, V. J. 1750  
 Titova, L. M. 3263

- Tobias, M. L. 1166  
 Todd, R. G. 626  
 Todorovic, R. A. 236  
 Tolman, J. H. 336  
 Toma, T. 1217, 2947  
 Tomich, F. Q. 922  
 Tominaga, M. 1988  
 Tonkal, T. E. 1034  
 Tonkyn, D. W. 1456  
 Tonn, R. J. 37, 561  
 Tontis, A. 471  
 Toohey, M. K. 412  
 Tooker, P. 2376  
 Topacio, T. M. 2804  
 Topacio, T. M., Jr. 2813  
 Toqir, G. 1541, 1775, 2915  
 Torales, G. J. 400  
 Tordi, M. P. 73  
 Torre, F. A. de la 1125  
 Torres Cañamares, F. 2941  
 Torybaev, Kh. K. 3288  
 Tosca, A. 1576  
 Toschkoff, A. S. 262  
 Toshev, G. 2542  
 Toulmond, A. 1731  
 Touraine, R. 1419  
 Touray, B. 1298, 1299  
 Toure, S. M. 1300, 1301  
 Tourneur, J. C. 1806  
 Tovey, E. R. 2489  
 Townsend, B. E. 1279, 1281  
 Townsend, L. H., Jr. 2703  
 Townson, H. 1786, 3314  
 Toyama, G. M. 480  
 Toyoda, M. 464  
 Tozer, R. S. 663  
 Tozer, W. 2086  
 Traub, R. 2305, 2306, 2307, 2311, 2321  
 Travassos da Rosa, A. P. A. 2627, 2655, 2656, 2898, 3224  
 Travassos da Rosa, J. F. 2656  
 Travassos da Rosa, J. F. S. 2655, 2898, 3224  
 Travassos Santos Dias, J. A. 1404  
 Travis, B. V. 141  
 Travland, L. B. 1237  
 Treherne, J. E. 1159  
 Trent, D. W. 1749, 2219  
 Trepte-Feuerborn, C. 475  
 Trepte, H. H. 475, 2184  
 Treverrow, N. L. 964  
 Trevisão, G. S. 1640  
 Trewern, M. A. 2405, 2682  
 Tribe, M. 219  
 Trigo, F. 2221  
 Trimble, J. M. 3406  
 Trimble, R. M. 2123  
 Tripathi, C. P. M. 1355  
 Tripathi, H. L. 1347  
 Tripathi, R. K. 1347  
 Trippa, G. 774, 1571  
 Troitskiĭ, V. A. 995  
 Trospier, J. H. 83, 3221  
 Trotter, G. Canestri- 12  
 Troubat, J. J. 1691  
 Trouillet, J. 135, 136  
 Trpis, M. 60, 1231, 2036, 2631  
 Trukhan, M. M. 841  
 Trukhan, M. N. 411  
 Trusov, V. I. 1034  
 Trykhan, M. N. 1058  
 Trypanosomiasis Bureau of the Ministry of Health, Mozambique 1307  
 Tsafir, N. 257  
 Tsai, L. Y. 819, 2864  
 Tschinkel, W. R. 918  
 Tsetse Research Laboratory, Langford, United Kingdom 871, 3003  
 Tsubokura, M. 880  
 Tsuchiyama, A. 1216  
 Tsushima, K. 1441  
 Tsuyama, S. 186, 685, 2190, 3366  
 Tu, Y. F. 1667  
 Tukei, P. M. 1825  
 Tully, J. G. 3081  
 Tumlinson, J. H. 3058  
 Tumrasvin, W. 662  
 Tumrasvin, W. 2921  
 Tund, M. M. 1496, 1962, 2478, 2775  
 Tunstall, J. 2401  
 Turchenko, L. N. 1024  
 Turell, M. J. 615, 1784, 2082  
 Turkestani, A. 2535  
 Turnbull, A. L. 2000  
 Turnbull, I. F. 911, 1382  
 Turner, B. V. H. 1156  
 Turner, D. A. 1860, 1861, 1862, 3321  
 Turner, D. P. 133, 134, 636  
 Turner, E. C., Jr. 2703  
 Turner, K. J. 986, 987  
 Turrentine, J. D., Jr. 2347  
 Turturro, A. 1351  
 Tüzün, Y. 519  
 Tyagi, D. 2059, 2889  
 Tyndale-Biscoe, M. 2728  
 Tyrell, D. J. 118  
 Uchikawa, K. 505  
 Udayati 817  
 Ueba, N. 3286  
 Ueda, M. 2050  
 Ugueto, C. Escalante de 579  
 Uilenberg, G. 499, 1410, 2225, 3060  
 Ullrich, F. H. 159  
 Ulmanen, I. 702  
 Ulug, E. T. 835  
 Ulvesæter, H. O. 1424, 1425  
 Ul'yanov, K. N. 1548  
 Umezurike, G. M. 2210  
 Undeen, A. H. 1854, 2258, 3313  
 Ungerman, G. 1488  
 Ungureanu, E. M. 95  
 United Kingdom, Agricultural Research Council 2650  
 United Kingdom, Agricultural Science Service 3048  
 United Kingdom, Edinburgh School of Agriculture 2761  
 United Kingdom, Tsetse Research Laboratory, Langford 871, 3003  
 United Nations Environment Programme 3327, 3328  
 United States Department of Agriculture 495  
 Upper Volta, Centre de Recherches sur les Trypanosomoses Animales 3004  
 Ural, A. 519  
 Urazbaev, G. A. 3053  
 Urban, E. 800, 2851  
 Urbanelli, S. 72  
 Uribe, L. J. 116  
 Urquhart, G. M. 1298, 1299  
 Ursu, A. 453, 1895  
 Urtiz, T. M. Pérez 1129  
 Urvölgyi, J. 924, 1647, 3399  
 Usova, A. A. 3153  
 Usova, Z. V. 1023, 1055, 1059, 1076, 1079, 1080  
 Uspenskiĭ, I. V. 254, 721  
 Uzakov, U. Ya. 3330  
 Uzdenov, U. V. 1048  
 Vail, H. D. 3021  
 Vaile, M. 3277  
 Vaisblat, A. S. 1666  
 Vaitkevičienė, G. B. 537, 541  
 Vaitkevičius, G. G. 537  
 Vaitkyavichene, G. B. 537, 541  
 Vaitkyavichyus, G. G. 537  
 Vakhabov, Z. F. 850  
 Vakhrusheva, Z. P. 1026  
 Vala, J. C. 1349  
 Valdez, R. 2750  
 Vale, G. A. 1881, 1882, 2997  
 Valente, D. 1160  
 Valentyuk, E. I. 1211, 2593  
 Valero López, A. 3117  
 Valla, M. E. 2965  
 Van Achterberg, C. 2275  
 Van Bronswijk, J. E. M. H. 734, 923, 2751, 3094  
 Van de Vrie, M. 391  
 Van den Assem, J. 2461  
 Van den Bosch, R. 1432  
 Van der Hammen, L. 1957  
 Van der Kaay, H. J. 2865  
 Van der Linde, T. C. de K. 2364  
 Van der Linden, M. E. Leegwater- 1984  
 Van der Linden, M. E. Leegwater- 1102  
 Van der Molen, J. N. 201  
 Van der Schaal, A. W. J. 201  
 Van der Vloedt, A. M. V. 1103, 1875  
 Van Doesburg, P. H. 1017  
 Van Essen, F. W. 2042  
 Van Etten, J. 1313, 2685, 3000  
 Van Gerwen, A. C. M. 2702  
 Van Ham, M. 282  
 Van Handel, E. 91  
 Van Heemert, C. 754  
 Van Lennep, M. 1178  
 Van Neste, D. 512  
 Van Pletzen, R. 2364  
 Van Rensburg, L. 3082  
 Van Riper, C., III 1796  
 Van Schalkwyk, D. J. 621  
 Van Wettere, P. 2996  
 Vandamme, R. 3199  
 Vander Meer, R. K. 1388, 2829, 3058  
 Vankova, S. A. 157  
 Vansulin, S. A. 2409  
 Var Petersen, H. del 2431  
 Vargas, J. G. Palacios- 2243  
 Vargas, L. 2398  
 Vargas, M. 456  
 Vargas V., M. 141, 2154  
 Varis, A. L. 2797  
 Varma, M. G. R. 1468  
 Varma, R. K. 32  
 Vashchenok, V. S. 359, 1515  
 Vasil'eva, A. M. 1415  
 Vasil'eva, I. S. 255, 1399  
 Vasil'eva, V. S. 542  
 Vasjukova, T. T. 2567  
 Vasquez, A. M. de 2576  
 Vasudevan, T. 2926  
 Vasyukova, T. T. 2567  
 Vater, G. 1976  
 Vattier-Bernard, G. 136  
 Vaucelle, T. Duriez- 1669  
 Vaughan, J. A. 2324  
 Vauk, G. 956  
 Vecchi, M. 665  
 Veccher, L. F. 2178  
 Veccherkin, S. S. 1069  
 Veiga, L. A. 330  
 Velasco Cedano, M. 352  
 Veljanov, D. K. 262  
 Veljanov, D. K. 250  
 Venkatanarayana, M. 2599  
 Venkatesan, R. A. 988  
 Venkatesh, K. 1612, 3028  
 Venturoli, M. 12  
 Vercammen-Grandjean, P. H. 1660  
 Verchagina, V. V. 1048  
 Vereshchagin, S. M. 2845  
 Verma, G. P. 664  
 Verma, G. S. 2352  
 Vermeulen, J. B. 1984  
 Vernet, G. 69  
 Véron, M. 2350  
 Verrier-Jones, E. R. 1975  
 Vershinina, O. N. 1032  
 Verves, Yu. G. 3337  
 Vervloet, D. 520  
 Vetter, R. S. 2493  
 Veyseyre, C. 1419  
 Vieira, A. M. 1202, 1203, 1204  
 Vigne, N. 2185  
 Vigo, G. 581, 1711, 3297  
 Vijayalakshmi, S. 1169  
 Vijayan, C. P. 3270  
 Vikram Reddy, M. 1595  
 Viktorov-Nabokov, O. V. 1027, 1028, 1056  
 Villa, A. Covisa 129  
 Villar, M. I. P. de 35, 1745  
 Villarroel, F. 3176  
 Vindevogel, H. 1413  
 Vinson, J. W. 2320  
 Vinson, S. B. 1724, 2203, 2206, 3159  
 Vinzant, B. 751  
 Vipulakom, P. 724  
 Vissault, J. 49  
 Vissian, L. 1967  
 Vlayen, P. 1797  
 Vloedt, A. M. V. van der 1103, 1875  
 Vobrázková, E. 514  
 Vockeroth, J. R. 2587  
 Vodenicharov, P. 2542  
 Vogt, K. 1912  
 Vogt, W. G. 164, 1909, 3035  
 Voigt, B. Sixl- 928, 932  
 Voigt, W. P. 272, 499  
 Volegova, K. V. 404  
 Volkov, V. I. 2735  
 Volkova, G. N. 1032  
 Volkova, N. S. 1075  
 Vollhardt, Y. 132  
 Volmer, H. 2549  
 Von Ochsee, G. A. Boon 2982  
 Vondracek, B. 2090  
 Vongtangswad, S. 60, 1231  
 Vorgetts, J., Jr. 2910  
 Vos, A. J. de 948  
 Voss, G. 1448  
 Votyakov, V. I. 3390  
 Vrie, M. van de 931  
 Vythilingam, I. 1800  
 Waage, J. 1170  
 Waage, J. K. 1632  
 Wada, A. Sakai- 790  
 Wada, E. M. 266, 267  
 Wada, Y. 99, 379, 1226, 1652, 3424, 3425  
 Wadano, A. 684, 3366  
 Wagner, G. G. 1640  
 Wagner, R. R. 525  
 Wahab, K. S. Abdel- 718  
 Wahab, K. S. E. Abdel- 2469, 2755  
 Waite Agricultural Research Institute, South Australia 3037  
 Waite, M. R. F. 835  
 Waitzbauer, J. 2768  
 Waladde, S. M. 3076  
 Walker, A. R. 3089  
 Walker, E. M. 941  
 Walker, G. P. 1611  
 Walker, J. M. 2728  
 Walker, R. J. 2842  
 Walker, T. W. 1193  
 Wall, B. J. 2175  
 Wall, W. J. 1906  
 Wallace, B. 1545  
 Wallace, H. G. 1245  
 Wallace, M. M. H. 2728  
 Waller, J. B. 2481  
 Walliker, D. 610  
 Walsh, J. F. 1581, 1704, 2152, 2672  
 Walter, G. 956, 3391  
 Walter, P. 1392  
 Walter, S. D. 831  
 Walters, L. L. 1543, 2083, 3241  
 Walther, R. R. 52  
 Walton, D. W. 1496, 1962, 2478, 2479, 2775  
 Walzl, M. G. 2768  
 Wan, K. M. M. 835  
 Wanchingda, D. M. 1115  
 Waner, J. L. 967  
 Wang, D. Q. 2231, 2245  
 Wang, F. Y. 1526  
 Wang, H. E. 361  
 Wang, J. 421, 868  
 Wang, J. B. 3100  
 Wang, S. F. 3161  
 Wang, T. C. 1365  
 Wang, Z. G. 1954  
 Wang, Z. S. 1954  
 Wangberg, J. K. 481, 1628  
 Warberg, M. R. 1981  
 Ward, R. D. 1256, 1257, 1258, 2967  
 Ware, G. W. 1987  
 Warnecke, M. 499



- Warner, P. V. 1089  
 Warre, P. R. 2509  
 Warren, G. H. 173  
 Warren, M. 576, 843, 2896  
 Warren, McW. 834  
 Washino, R. K. 2073, 2115, 2415, 3203  
 Washio, H. M. 791  
 Wassef, H. Y. 241  
 Wassel, M. E. 3145  
 Watanabe, M. 1585  
 Waters, K. S. 258, 259, 260  
 Watson, J. 1570  
 Watt, D. 2499  
 Wattal, B. L. 572, 606, 608, 609, 1261, 1262, 1263, 1264, 1265, 1266, 1267, 2059, 2601, 2889, 3018  
 Watts, J. E. 171, 179, 193, 3039  
 Wayman, C. 3057  
 Weaver, J. S., III 2515  
 Weaver, R. J. 2009, 2844  
 Webb-Gebert, F. 3141  
 Webb, P. M. 1761  
 Webb, S. 219  
 Weber, G. 264, 1394, 3077  
 Webster, J. M. 2610  
 Weems, H. V., Jr. 34  
 Wegler, R. 2262  
 Wegner, Z. 50  
 Wehrhahn, C. 1621, 3044  
 Weidhaas, D. E. 1763  
 Weill, J. 2779  
 Weintraub, J. 3333  
 Weisbroth, S. H. 296  
 Weiss, D. 1894  
 Weiss, K. 2924  
 Weiss, M. 151, 1098  
 Weissman, D. 3353  
 Welch, H. E. 4, 864  
 Welch, H. M. 2378  
 Wellington, W. G. 2123  
 Wellman, S. E. 24, 25  
 Wellmer, H. 233  
 Wen, T. H. 996  
 Wendell S., J. 1132  
 Wenk, P. 2327, 2668  
 Werner, Y. 292  
 Wernsdorfer, W. 3194  
 Werren, J. H. 208  
 Wery, M. 1847  
 Westoby, M. 2410  
 Westwood, A. R. 3311  
 Wettore, P. van 2996  
 Wettstein, K. 756  
 Wetzel, H. 645, 1104, 2406  
 Whaler, B. C. 1929  
 Wharton, R. H. 959  
 Whisler, H. C. 1237  
 Whitaker, J. O. 3096  
 Whitaker, J. O., Jr. 289, 509, 1966, 2236, 2249, 3145  
 Whitcomb, R. F. 3081  
 White, C. P. 1195  
 White, D. J. 1195  
 White, S. L. 1607  
 White, T. R. 2515  
 Whitfield, T. 455  
 Whitford, W. G. 2729  
 Whitlaw, J. T., Jr. 2020  
 Whitney, W. K. 756  
 Whitten, C. J. 2429  
 Whitten, M. J. 2199, 2202  
 WHO Expert Committee on Vector Biology and Control 526  
 Wicher, K. 1386  
 Wickremesinghe, R. S. B. 1812  
 Wiczorek, H. 910  
 Wiedenmann, G. 1168  
 Wigglesworth, Sir V. B. 1725  
 Wigglesworth, V. B. 1159, 1725, 2835, 2861, 3150  
 Wikel, S. K. 3067  
 Wilder, W. H. 79  
 Wildey, K. B. 486, 1140, 3057  
 Wildie, J. A. 1750  
 Wilhelmsen, C. 296  
 Wilke, M. 1016  
 Wilkes, J. 1509  
 Wilkes, T. J. 1769, 2149, 2363, 2874  
 Wilkie, J. S. 889  
 Wilkins, C. A. 2248  
 Wilkins, D. B. 2026  
 Wilkinson, F. C. 2563  
 Wilkinson, P. R. 954  
 Willadsen, P. 952, 960, 1395  
 Williams, C. V. F. 1979  
 Williams, D. 376  
 Williams, D. F. 482, 1090, 2725, 3352  
 Williams, D. J. 914  
 Williams, G. E. 2407  
 Williams, H. J. 2203  
 Williams, J. E. 2317  
 Williams, J. M. 2168  
 Williams, J. O. 561  
 Williams, J. R. 2824  
 Williams, J. S. 1979  
 Williams, K. L. 2702  
 Williams, M. A. 533, 1720  
 Williams, M. C. 2043  
 Williams, M. S. 3066  
 Williams, P. 2491, 3185  
 Williams, R. E. 2407, 3012  
 Williams, R. W. 2922  
 Williams, S. C. 1676  
 Williamson, D. L. 1089, 3081  
 Willis, N. L. 450, 3370  
 Willis, O. R. 377  
 Wilps, H. 3026  
 Wilson, A. J. 938, 961  
 Wilson, B. H. 2440  
 Wilson, E. O. 2725  
 Wilson, J. L. 3068  
 Wilson, N. 737, 1187, 2001, 2303, 2463, 2584  
 Windmill, D. M. 3029  
 Wiroreno, W. 2807, 2819  
 Wirth, W. W. 131, 1252  
 Wirtz, R. A. 319, 2347, 2828, 3249  
 Wiśniewski, J. 1655  
 Wisnivesky-Colli, C. 1506  
 Wisseman, C. L., Jr. 2321  
 Witkowski, J. A. 348  
 Wittmer, W. 2526  
 Woeltjes, A. G. 1002  
 Woeltjes, A. G. W. 1001  
 Wolda, H. 2078  
 Wolf, A. de 1593  
 Wong, T. L. 107  
 Wongchari, V. 2331  
 Woo, P. T. K. 2863  
 Woo, S. L. 1442  
 Wood, D. H. 46  
 Wood, D. M. 1533, 2587  
 Wood, E. 35  
 Wood, E. J. 1745  
 Wood, G. M. 1395  
 Wood, M. R. 2008  
 Wood, R. J. 1546, 2378, 2960  
 Woodall, J. P. 3246  
 Woodard, A. G. 2933, 3254  
 Woodard, D. B. 1463, 1464  
 Woodburn, T. L. 164, 1909, 3035  
 Woodford, P. J. 1420  
 Woodroffe, G. M. 2033  
 Woods, D. R. 2168  
 World Health Organization 526, 3128  
 Wortmann, F. 3383  
 Wotton, R. S. 1577  
 Wragg, T. E. 2091  
 Wraight, S. P. 1531  
 Wright, A. I. 653  
 Wright, F. C. 998, 2486, 2487, 2488  
 Wright, J. E. 2438  
 Wright, R. E. 908, 1899, 2060, 3015  
 Wright, R. H. 389  
 Wu, H. Y. 2864  
 Wu, R. 1188  
 Wu, W. C. 2864  
 Wunderer, H. 2714  
 Wurtsbaugh, W. 2092  
 Wurtsbaugh, W. A. 2090  
 Wygodzinsky, P. 1846  
 Wypych, J. 1386, 1634  
 Xavier, S. H. 1016, 2049, 2072  
 Xiangxiong, Zh. 407  
 Xie, B. Q. 569, 570, 3180  
 Xu, R. M. 215  
 Yablonskaya, V. A. 3399  
 Yadav, M. P. 2748  
 Yadava, P. S. 1931  
 Yadava, R. L. 103  
 Yago, A. 3097  
 Yagodin, S. V. 21, 1163, 1486  
 Yajima, T. 317, 2796  
 Yakuba, V. N. 359  
 Yakunin, B. M. 815  
 Yamagata, Y. 1585  
 Yamamoto, I. 1437  
 Yamamoto, S. 3108  
 Yamamura, T. 1446  
 Yamanishi, H. 85  
 Yamaura, I. 891, 1904  
 Yamov, V. Z. 1590, 2689, 3330  
 Yamura, T. 3108  
 Yan, X. C. 818  
 Yaneva, V. A. 1659, 1664  
 Yáñez, I. E. Canales 1125  
 Yáñez, Y. García 352  
 Yang, G. R. 293, 996, 1667  
 Yang, M. L. 1954  
 Yarbrough, J. D. 3129  
 Yaroslavl'tsev, V. P. 3330  
 Yarullova, R. A. 1042  
 Yasuda, M. 1450  
 Yates, W. E. 2271  
 Yatham, N. R. 1914  
 Yazdanpanah, H. 2911  
 Yekutieli, P. 2285  
 Yen, L. T. My- 3424, 3425  
 Yeramian, M. A. 476, 2721  
 Yevenes, I. 523  
 Yokohari, F. 2843  
 Yonekura, M. 891, 1904, 2450  
 Yoneyama, Y. 1379, 3022  
 Yong, H. S. 625, 3274  
 Yoshida, M. 3286  
 Yoshida, T. 2462  
 Yoshikawa, H. 1450  
 Yoshioka, H. 1441  
 Youdeowei, A. 1321  
 Youdeowei, Y. 1099  
 Younce, L. C. 2096  
 Young, A. S. 276, 499, 709, 2474, 3075, 3089  
 Young, C. J. 133, 134  
 Young, D. G. 2390, 2661  
 Young, E. R. 277  
 Youngson, J. H. A. M. 2378  
 Youssef, M. 2776  
 Yu, C. H. 1738  
 Yu, H. 1728, 1729  
 Yu, S. J. 1371  
 Yu, Z. Z. 293, 996, 1667, 2246  
 Yudaev, O. N. 1066  
 Yudin, B. S. 3184  
 Yudina, S. A. 3184  
 Yun, Y. H. 1728  
 Yunginger, J. W. 1389, 1933, 2455  
 Yunker, C. E. 2238, 3081  
 Yurgenson, I. A. 356, 1519  
 Zachary, D. 2180  
 Zagniborodova, E. N. 571, 1518  
 Zagret'dinov, R. G. 1594  
 Zahar, A. R. 420  
 Zaim, M. 2368  
 Zaini, A. 2911  
 Zajac, A. 1979  
 Zaka-ur-Rab, M. 859, 1354  
 Zakharieva-Stoilova, B. 1385  
 Zakour, L. Ben- 2255  
 Zalar, G. L. 52  
 Zalom, F. G. 2101  
 Zambia, Department of Veterinary and Tsetse Control Services 1308, 1333  
 Zanforlin, M. 823, 2179  
 Zanin, E. 10  
 Zapata Mata, R. 1461  
 Zapatero Ramos, L. M. 243  
 Zareh, N. 2410  
 Zarrouk, K. 2251, 2255  
 Zebold, S. L. 1237  
 Zeev, M. Bar- 39  
 Zeledon, R. 1344, 3138  
 Zennoyji, K. 2846  
 Zenoble, R. D. 1978  
 Zerba, E. N. 35, 1745, 3169  
 Zerbo, D. G. 1704  
 Zhang, X. Z. 213  
 Zhang, Z. Y. 2604  
 Zhantiev, R. D. 594  
 Zhao, S. X. 1668, 2247  
 Zhdanova, T. G. 1024  
 Zhekov, N. G. 902  
 Zheng, H. 2140  
 Zheng, S. C. 421  
 Zhenlian, L. 407  
 Zhifu, C. 407  
 Zhitova, E. A. 2745  
 Zhong, C. 2140  
 Zhou, Z. Y. 1954  
 Zhovtyi, I. F. 1026, 2318  
 Zhuang, P. J. 2604  
 Zhubanazarov, I. Zh. 1516  
 Zid, S. A. Abou 562  
 Zidar, J. A. 1118, 1119, 1120, 1121, 3147, 3148  
 Zielke, E. 409, 605, 1794, 1795  
 Ziese, D. 780  
 Zill, S. N. 2547  
 Zimbabwe, Agricultural Research Council 1405  
 Zimbabwe, Secretary for Health 2006  
 Zimmerman, J. H. 3059  
 Zimmerman, R. H. 1529  
 Zimmermann, E. M. 1933  
 Zinov'eva, K. B. 894  
 Ziprin, R. L. 2764  
 Zitek, K. 514  
 Ziv, M. 290  
 Zivković, V. 137  
 Zlotkin, E. 200  
 Zlotorzyska, J. 2851  
 Zobebelein, G. 1014  
 Zohdy, N. Z. 476, 2721  
 Zombori, L. 2512  
 Zomer, E. 2047  
 Zorka, T. J. 2432  
 Zorzopulos, J. 2217  
 Zuk, P. 1671  
 Zulu, F. P. 249  
 Zulueta, J. de 617  
 Zumpt, F. 2537  
 Župančičová, M. 924, 932  
 Zurfüh, R. 3436  
 Žutić, M. 237  
 Zwart, D. 1410  
 Zweig, G. 2260  
 Zwick, H. 3315

# SUBJECT INDEX

The subject indexes of the *Review of Applied Entomology* not only provide for detailed manual searches under a wide variety of headings, but also provide a wide variety of standardised terms for use in computer-assisted searches of the CAB database. The most detailed entries are those under the names of arthropods, but other organisms, countries, chemicals, habitats and general subjects (e.g. Biological control; Irrigation; Light-traps; Pasture management; Reviews) are also used as headings. Index headings are not selected from any one thesaurus, but fairly strict vocabulary control is achieved by careful checking of systematic names of organisms and chemicals, by adhering to CAB standards for pest-control chemicals and pharmaceuticals, and by selecting most other index headings to conform with other CAB abstract journals or with *Chemical Abstracts* or *Index Medicus*. All references are to abstract numbers.

Under the names of arthropods there are references to their control, distribution, hosts, natural enemies, taxonomy, vector ability and miscellaneous subjects. Entries for species will be found under the generic name, and there are also inverted names with the specific and subspecific epithets placed first. The names used for arthropods in this index are those used in the abstracts, because these names have all been checked against the card indexes maintained by the Institute. These card indexes are continuously updated to take account of taxonomic revisions, and in cases of difficulty the taxonomists employed by the Institute or by the British Museum (Natural History) are consulted. If two or more names are accepted by the *Review* for a taxon during one year, each name is entered separately, with a 'see also' cross-reference to other names. Cross-references from names used by authors but not accepted by the *Review* are given to the currently-accepted names.

Animals other than arthropods are indexed to specific level only, under English common names for the more important domesticated birds and mammals, or under scientific names. At both these types of heading will be found references to the arthropods that affect the animal concerned, to arthropod-transmitted pathogens, and the side-effects of pesticides. Cross-references are given between common names (sometimes inverted) and scientific names.

Plants are indexed under English common names of the more important or familiar crops, or under scientific names down to species level. At both these types of heading will be found references to the arthropods connected with the plants concerned. Cross-references are given between common names (sometimes inverted) and scientific names.

Pathogens of animals other than arthropods are indexed under the name of the pathogen, the scientific name if one is available, or else the English common name. Some entries will also be found at the names of diseases (sometimes inverted). Viruses pathogenic for arthropods are indexed under the name of the host, and the hosts are listed at the heading 'Viruses and virus diseases'. Other pathogens of arthropods are indexed under the scientific name of the pathogen. As an aid to locating all the information concerning annelids, bacteria, cnidarians, fungi, helminths, molluscs and protozoans, an entry has been made for each relevant abstract at the name of either a phylum or a class.

Geographical locations are keyworded, as appropriate, to faunal regions, continents, countries, archipelagoes or islands, and (for Australia, Canada and the USA) to States, Provinces or Territories. The subheadings refer mainly to pest arthropods, with some references to pest control and diseases.

Chemicals are normally indexed under either a common name or a systematic name, but a few unidentified or complex substances are indexed under names used by authors. The majority of the common names used for chemicals for the control of arthropod pests are listed on pp. 7-10 of *RAE* volume 68, and in addition, other common names stated in the 6th. edition of the *Pesticide Manual* (noticed in *RAE/B* 68, 2032) to have been adopted by BSI, ISO or ANSI are now used. Common names of herbicides and plant growth regulators listed in recent issues of *Weed Abstracts* are now used in *RAE*, and so are the common names of other pesticides (including anthelmintics, fungicides and rodenticides) given in the *Pesticide Manual*. International Nonproprietary Names approved by the World Health Organization are also now used in *RAE*. Most substances without approved common names are indexed under the names used in the indexes of *Chemical Abstracts* volumes 86-95. Cross-references are provided to these inverted systematic names, and in some cases synonyms are given with the entries. Cross-references are also provided from inverted systematic names to many of the common names, and definitions are printed at these headings.

Medical, immunological and veterinary headings are normally selected from *Medical Subject Headings*.

Habitat headings are chosen, whenever possible, beginning with the name of a vertebrate (e.g. Cattle housing; Pig housing) or of a crop (e.g. Coffee plantations, Rice-fields), though most appropriate stands of trees are indexed under 'Forests' or 'Woodland'. In most other cases, inverted names are selected as headings (e.g. Lakes, recreational; Bogs, alder; Pastures, irrigated). Subheadings are mostly concerned with the distribution of arthropods and the non-target effects of pest control.



# SUBJECT INDEX

- ABA** (see Absciscic acid)
- abactor, *Tabanus***
- Abate** (see Temephos)
- Abattoirs**
- Cochliomyia macellaria* in, in Brazil 479
- Diptera in, in Yugoslavia 901
- Musca domestica* in, in Brazil 479
- Ophyra aenescens* in, in Brazil 479
- abchazicus, *Culicoides***
- abdominalis, *Camponotus***
- abdominalis, *Tabanus***
- aberrans, *Chrysops***
- Abortion**, in cattle, caused by *Trypanosoma* 1298
- Abscess**
- in rabbit, caused by *Hyalomma impressum* 1939
- In sheep, caused by *Hyalomma impressum* 1939
- Absciscic acid**, in *Sarcophaga bullata*, inhibiting vitellogenesis 3360
- abserratus, *Aedes***
- Abstinsons**
- in *Glossina morsitans*
- mating inhibition by 3324
- receptors for 3325
- in *Musca domestica*
- mating inhibition by 3324
- receptors for 3325
- AC-217300** (see 2(1H)-Pyrimidinone, tetrahydro-5,5-dimethyl-, [3-[4-(trifluoromethyl)phenyl]-1-[2-[4-(trifluoromethyl)phenyl]ethenyl]-2-propenylidene]hydrazonone)
- AC-222705** (see Benzenecetic acid, 4-(difluoromethoxy)- $\alpha$ -(1-methylethyl)-, cyano(3-phenoxyphenyl)methyl ester, (S)-)
- acanthina, *Neopsylla***
- Acanthocephala** 3147
- Acanthocephalans**, index-catalogue 3147
- Acanthocera**, genitalia in 463
- Acanthocera coarctata**
- descriptions of 463
- in Brazil 463
- in Paraguay 463
- Acanthocera exstincta**
- descriptions of 463
- in Argentina 463
- Acanthocyclops vernalis**
- Coelomomyces* spp. in 394
- C. dodgei* in, production of 611
- C. psorophorae* in, culturing of 1237
- preying on, *Romanomermis culicivorax* 3244
- Acanthophthirius polonicus**
- descriptions of 734
- in Netherlands 734
- on *Myotis dasycneme*, in Netherlands 734
- acanthopus, *Hoplopleura***
- Acari**
- in *Agelaius phoeniceus* nests, in Manitoba 864
- in cattle-dung fertilizer, in Irish Republic 324
- on *Agelaius phoeniceus*, in North America 4
- on man, hypersensitivity to 319
- on rat, in Poland 50
- on rodents, in Hawaii 922
- on small mammals, in Czechoslovakia 933
- overwintering of, in birds' nests 2005
- preparations of, remounting of 2485
- Acaricide resistance**, in vectors 2286
- Acaricides**
- evaluating of 974, 1406
- substances tested as:
- avermectins 2248
- cupronaphth 955
- naphthenates 955
- secondary amines 2488
- straight-chain dimethylamines and dimethylamides 998
- tertiary amines 2488
- Acarology**, glossary 1957
- Acarus siro**
- antigens of 1669
- in Romania 980
- Acarus siro** *contd.*
- in cattle feed, effects of 1662
- on man, role in colitis of 980
- Acephate** (O,S-dimethyl acetylphosphoramidothioate)
- against, *Musca domestica* 1893
- Acetamide, N-butyl-N-phenyl-,** with 2-butyl-2-ethyl-1,3-propanediol, and phenylmethyl benzoate, repellent for, *Amblyomma americanum*, on man 1937
- Acetamide, N-[2-(3,4-dihydroxyphenyl)ethyl]-**
- in *Aedes aegypti*, inhibiting DOPA decarboxylase 1761
- in *Lucilia cuprina*
- overcoming effects of DOPA decarboxylase inhibitors 1382
- overcoming effects of methyl dopa on larval cuticle 911
- in *Periplaneta americana* nervous system 2548
- Acetamide, 2-fluoro-,** in *Musca domestica*, diflubenzuron delaying toxic effects of 1892
- Acetamide, 2-[4-(methoxyphenyl)methoxy]-N,N-dipropyl-,** repellent for, *Panstrongylus megistus*, on rat 39
- Acetamide, thio-** (see Ethanethioamide)
- Acetic acid**
- Cochliomyia hominivorax* responses to 1896
- Culex oviposition* responses to 1209
- in *Cochliomyia macellaria*, glutamate product during anaerobic metabolism 1359
- repellent for
- Muscidae 1881
- Stomoxyinae 1881
- Acetic acid, (diethylamino)oxo-,** C<sub>6</sub>-C<sub>8</sub> alkyl esters, repellent for, *Hypoderma* spp., on cattle 2689
- Acetone** (see 2-Propanone)
- Acetylcholine** (see Ethanaminium, 2-(acetyloxy)-N,N,N-trimethyl-)
- Acetylcholinesterase** (see Esterase, acetyl choline)
- Acetylglucosaminidase**, in *Stomoxys calcitrans* 3030
- Acetylglucosaminidase,  $\beta$ -,** in *Musca domestica* head, activity pattern of 460
- Acetylglucosaminyltransferase, chitin-uridine diphosphate**
- in *Stomoxys calcitrans*
- characterisation of 1901
- not inhibited by insect growth regulators 3032
- Acheta domesticus**
- antennae in, sensilla on 548
- control of, inert dusts for 3126
- sterilisation of, chemosterilants for 673
- Achlya hypogyna**, in, Culicidae, in USSR 1019
- Acid phosphatase** (see Phosphatase, acid)
- acinaciseta, *Radfordia***
- Aclista alticollis**
- in Romania 453
- parasitising
- Calliphora* spp., in Romania 453
- Lucilia sericata*, in Romania 453
- Prophila casei*, in Romania 453
- aconitus, *Anopheles***
- Acorus calamus**, insecticidal activity of extracts of 1561
- Acridodea**, in Bermuda, book 792
- Acriflavine**, in cattle, effects on infectivity of *Babesia* to ticks of 1069
- Acrocomia, *Rhodnius prolixus*** in, in Venezuela 37
- Actellic** (see Pirimiphos-methyl)
- Actinomycin D** (see Dactinomycin)
- Aculeata**, in British Isles 691
- acuminata, *Hybomitra***
- acutellaris, *Blankaertia***
- acutangula, *Coproica*** (see *Leptocera acutangula*)
- acutangula, *Leptocera* (*Coproica*)**
- acutascuta, *Walchia***
- Acyrtosiphon pisum**, control of, insecticides for 2507
- adamesi, *Culex***
- adenensis, *Anopheles culicifacies*** (see *A. culicifacies*)
- Adenine** (see 1H-Purin-6-amine)
- Adenine phosphoribosyltransferase** (see Phosphoribosyltransferase, adenine)
- Adenosine**
- in *Musca domestica*, effects on pupariation of 188
- cyclic 3',5'-(hydrogen phosphate), in *Periplaneta americana*, increasing phosphorylase activity in hind-gut 336
- Adenosine 5'-(tetrahydrogen triphosphate)**
- diet component for, *Glossina palpalis* 645, 1104
- in *Aedes aegypti*, dependence of methenyltetrahydrofolate synthetase activity on 838
- Xenopsylla cheopis* feeding responses to 2326
- adersi, *Simulium***
- adisi, *Trichillum***
- adjunctus, *Cimex***
- Adlerius**, taxonomy of 869
- Adrenal cortex hormones**, in man, not affecting hypersensitivity to *Triatoma infestans* 3167
- adustus, *Ceratophyllus***
- advena, *Crabro***
- advenarius, *Ceratophyllus*** (see *Megabothris advenarius*)
- advenarius, *Megabothris* (*Ceratophyllus*)**
- Aedeomyia squamipennis**
- Gamboa viruses in
- in Argentina 2629
- in Ecuador 2629
- in Panama 2629
- in Argentina 2629
- in Ecuador 2629
- in Panama 2629
- Aedes**
- antibiotics in, toxicity of 1056
- arboviruses in, transmission of 1826
- Cache Valley virus in, in New York State 3246
- control of 3203
- biological 1537, 2088, 2346
- genetic 3140
- integrated 2121
- Culicimermis schakhovii* in, in Ukraine 1025
- electrophoresis for studying 70
- evolutionary cytogenetics of 1547
- fungi in
- in Ukraine 1757
- in USSR 1019
- in Argentina 400
- in Azerbaijan 852
- in Canada 1533
- in Canary Islands 2071
- in Cuba 849
- in Finland 2957
- in Hokkaido 603
- in Kurile Islands 1760
- in Nigeria 602
- in Oriental region 575
- in Quebec 2881
- in Sakhalin Island 1760
- in South Africa 1248
- in Soviet Maritime Territory 3264
- in Spain 2941
- in Ukraine 1024
- in USA 3209
- in USSR 1548
- in forests, in Belorussia 1058
- in irrigated pastures, in California 2088
- in pools, productivity of 2958
- in reservoir lakes, in Tuva ASSR 2588
- in rice-fields, in California 3203
- in water containers, in Nigeria 2895
- in wildlife areas, in California 2121
- in woodland, vertical distribution of 1212
- Japanese encephalitis, virus in, in China 1827
- larvae of, distinguishing instars of 2611
- larval development in, effects of sodium chloride on 3231
- mating in 1766

**Aedes contd.**

- Microsporidia in, in Ukraine 1025
- parasitised by, water mites, in Quebec 2354
- predators of 2931
- detecting of 1482, 1483
- Saint Louis encephalitis, virus in, in Brazil 2898
- seasonal abundance of 2957
- taxonomy of, isoenzymes as characters for 53
- tracheoles in 2835
- Aedes abserratus**, *Romanomermis nielsenii* in, pathogenicity of 1817
- Aedes aegypti**
  - accessory glands in
    - nucleic acid synthesis in 2602
    - protein synthesis in 2602
  - $\alpha$ -amanitin in, preventing digestion of blood-meals 1527
  - amino acids in, not affected by polluted water 3273
  - antennae in, sensilla on 827
  - Asocystis culicis* in, in Taiwan 1215
  - attractants for 1525
  - Bacillus sphaericus* in, pathogenicity of, effects of larval behaviour on 3260
  - B. thuringiensis* in, effects of age on susceptibility to 2042
  - blood-meals in, digestion of 3196
  - breeding places of 602, 1800
  - Brelinia booliati* in, effects on adipose tissue of 59
  - Brugia malayi* in, infectivity of 2036
  - B. pahangi* in, infectivity of 2036
  - chikungunya virus in, transmission of 1246
  - Coelomomyces psorophorae* in, not infective 1237
  - control of 82, 2285
    - biological 118, 1228, 1247, 1711, 2042, 2084, 2622, 3250
    - eliminating breeding places for 115
    - genetic 2365
    - growth regulators for 1453, 1555, 1710, 1810, 1986, 1988, 2829
    - insecticides for 115, 116, 412, 1245, 1438, 1714, 1763, 1810, 2133, 2355, 2640, 2816, 2817, 2879, 2886, 2920, 3247
    - manual 3205
    - mucilaginous seeds for 2601
    - repellents for 1525, 1813, 2347, 2374
    - sanitation for 412
  - DDT in, uptake and metabolism of 2960
  - DDT resistance in, mechanisms of 2960
  - dengue virus in
    - replication of 85
    - transmission of 82, 115, 390, 2130
  - densonucleosis virus in
    - effects of 105
    - storage of 3192
  - descriptions of 575
  - development in, dehydrogenase activity during 2034
  - developmental abnormalities in, chromosome markers for 593
  - digestive enzymes in 1527
  - Dipetalonema dessetae* in, effects on adipose tissue of 59
  - Dirofilaria immitis* in, infectivity of, genetics of 1786
  - D. repens* in, utilisation of host constituents by 101
  - eggs of, tanning in ovaries of 2603
  - enzymes in 73, 101, 126, 399, 838, 842, 1761, 2034, 2076, 3262, 3291
  - in gravid and non-gravid virgins 592
  - excreta of, determination of uric acid and hematin in 1564
  - female polygamy in, relation of gonotrophic activity and 2922
  - genetic variation in 399
  - genetics of 2817
  - Getah virus in, replication of 89
  - in Burma 1247
  - in Canary Islands, eradication of 2071
  - in China 2349
  - in Colombia 116
  - in Fiji 412
  - in French Guiana 1154
  - in Gambia 393, 2037, 2038
  - in India 2640

**Aedes aegypti contd.**

- in Indonesia 1555
- in Kenya 2365, 2876
- in Malaysia 1245, 1800
- in Nigeria 602, 1194, 1230, 2895
- in Puerto Rico 2136, 3247
- in Seychelles 1825
- in Taiwan 1215
- in Thailand 82
- in Tokelau Islands 1833
- in Upper Volta 1714
- in USA 65, 2133
- in Venezuela 2643
- in cassava fermentation pools, in Nigeria 602
- in cemeteries, in Puerto Rico 3247
- in cemetery vases, in Venezuela 2643
- in dwellings, in West Malaysia 1800
- in flower vases, in Fiji 412
- in forest clearings, in Nigeria 1194
- in plant containers, in Fiji 412
- in teak plantations, in Nigeria 1194
- in tree holes, in Kenya 2876
- in tyres
  - in Fiji 412
  - in Florida 65
- in water containers, in Nigeria 2895
- juvenile hormones in, regulation of activity of 2062
- life tables for 2644
- malathion resistance in, in Puerto Rico 2136
- male terminalia in 859
- marking of, radiophosphorus for 3294
- meiotic drive in, polymorphism for modifiers of 2959
- mid-gut in
  - digestive cycle and ribosomes in 842
  - effects of blood-meals on 1527
- moulting hormones in
  - activity pattern of 2595
  - effects on ovarian development of 408
- Murray Valley encephalitis, virus in, transovarial transmission of 1840
- Newcastle disease, virus in, infectivity of 2817
- nitrogen excretion in, regulation of 2076
- nutrition of 2608, 2817
- olfactory system in, evolution of 3132
- on man
  - in Gambia 393
  - in Nigeria 1230
  - in Thailand 82
- not affected by cystic fibrosis 621
- Onchocerca gutturosa* in, production of 585
- ovarian development in, regulation of 2062
- ovaries in, proteins in 91
- oviposition attractants for 1759
- aquatic-plant extracts as 2355
- oviposition deterrents for 1209
- aquatic-plant extracts as 2355
- plant extracts as 2618
- Plasmodium gallinaceum* in, development of 2624, 3196
- preyed on by
  - Libellula* spp., in Burma 1247
  - Notonecta glauca* 1223
  - N. maculata* 1223
  - Pimephales promelas* 2936
  - Toxorhynchites* spp. 2044
  - T. rutilus* 1756
  - in Florida 65
- rearing of, diets for 2608
- regional origin of, enzyme markers for 126
- Rift Valley fever, virus in, transmission of 2139
- Romanomermis culicivox* in, culturing of 3206
- R. nielsenii* in, rearing of 1817
- seasonal abundance of 65, 412
- sex ratio in, distortion of 1546, 2378
- short-wing mutant of 826
- sibling crosses as affecting 2644
- Sindbis virus in, transmission of 1471
- sterilisation of, chemosterilants for 1755
- surveillance of 2133
- traps for 2133
- Trypanosoma hedricki* in, not developing 2863
- tyrosine in, metabolism of 2047

**Aedes aegypti contd.**

- Vavraia culicis* in, infectivity of 2891
- vitellogenesis in, hormonal regulation of 3268
- vitellogenins in, regulation of synthesis of 2613
- West Nile virus in, replication of 89
- Wuchereria bancrofti* in
  - morphology of 605
  - uptake from man of 2589
- yellow fever virus in
  - estimating infection rate with 831
  - in Gambia 2037, 2038
  - replication of 2637
  - transmission of 2637
- Aedes aegypti**  $\times$  **A. mascarensis** 593
- Aedes aegypti aegypti**
  - genetic variation in 399
  - habitats of 1234
- Aedes aegypti formosus**
  - genetic variation in 399
  - habitats of 1234
- Aedes africanus**
  - biology of 1112
  - chikungunya virus in, in Central African Republic 2066
  - control of, insecticides for 2918, 2919
  - in Central African Republic 2066, 3295
  - in Nigeria 1194, 1230, 2895, 2918, 2919
  - in Uganda 1112
  - in forest clearings, in Nigeria 1194
  - in gallery forests, in Central African Republic 2066
  - in teak plantations, in Nigeria 1194
  - in water containers, in Nigeria 2895
  - on man, in Nigeria 1230
  - oviposition in 1230
  - yellow fever, virus in, in Central African Republic 3295
- Aedes albopictus**
  - arboviruses in, infectivity of 1524
  - Asocystis taiwanensis* in, in Taiwan 1215
  - brown-eye mutant of 379
  - cell cultures from 1526, 1997
  - arbovirus isolation in 2950
  - changes in 3287
  - incorporation of labelled metabolites into 1568
  - pH variation in 1566
  - chikungunya virus in
    - mutants of 836
    - transmission of 1246
  - Coelomomyces stegomyiae* in, in Taiwan 2031
  - control of 82
  - growth regulators for 1556
  - insecticides for 1245, 2817
  - dengue virus in
    - in Seychelles 1825
    - infectivity of 1526, 2883
    - transmission of 82, 115
  - genetics of 2817
  - Getah virus in
    - isolating of 3286
    - replication of 89
  - in China 2349
  - in Indonesia 1556
  - in Japan 2947
  - in Malaysia 1245, 1800
  - in Philippines 856
  - in Santa Cruz Islands 1550
  - in Seychelles 1825
  - in Solomon Islands 1550
  - in Taiwan 1215, 2031
  - in Thailand 82
  - in USA (Hawaii) 1796
  - Inkoo virus in, persistent infection with 1839
  - Japanese encephalitis, virus in, isolating of 2032, 3286
  - Kunjin virus in, inhibiting development 844
  - Newcastle disease, virus in, infectivity of 2817
  - Nodamura virus in, pathogenicity of 1773
  - nutrition of 2817
  - on man
    - in Hawaii 1796



- Aedes albopictus* contd.**  
on man *contd.*  
in Thailand 82  
Ross River virus in, persistent infection with, polypeptide synthesis during establishment of 582  
Saint Louis encephalitis, virus in, transovarial transmission of 1784  
San Angelo virus in  
infection of ovarioles with 2628  
transovarial transmission of 844, 2134  
Semliki Forest virus in  
cell fusion induced by 114  
effects of pH on 1567  
pathogenicity of 1569  
persistent infection with 2639  
polypeptide synthesis during establishment of 582  
replication of 2376, 2639  
subviral particles from 113  
Sindbis virus in  
defective-interfering particles of 835  
factor antagonistic to 1838  
interference in 2961  
persistence of 2961  
Ukuniemi virus in, persistent infection with 1839  
vesicular stomatitis virus in  
defective interfering particles of 1834  
replication of 1835  
West Nile virus in  
infectivity of 1526  
replication of 89  
White-body mutant of 379
- Aedes alcasidi***  
*Ascocystis armigerei* in, development of 1215  
*A. lanyuensis* in  
development of 1215  
in Taiwan 1215  
*Coelomomyces macleayae* in, in Taiwan 2031  
in Taiwan 1215, 2031
- Aedes atropalpus***  
in USA 3251  
in tyres  
in Indiana 3251  
in Ohio 3251  
mid-gut in, pH in 63  
moulting hormones in 125  
activity pattern of 2595  
ovarian development in  
hormonal induction of 2598  
hormonal regulation of 125  
induced by ecdysterone 1542  
ovaries in, proteins in 91  
*Romanomeris nielsenii* in, development of 1817
- Aedes atropalpus atropalpus***  
gene transfer from *A. epactius* to 1195  
in USA 1195  
in tyres, in New York State 1195
- Aedes atropalpus epactius* (see *A. epactius*)**
- Aedes aurotaeniatu***, pupal seta 13-CT in 2948
- Aedes australis***, *Coelomomyces opifexi* in, mode of entry of 107
- Aedes bromeliae***  
in Kenya 2876  
in tree holes, in Kenya 2876
- Aedes caballus***  
aestivation in 84  
in South Africa 84  
on man, in South Africa 84  
on sheep, in South Africa 84  
Rift Valley fever, virus in, infectivity of 2139
- Aedes campestris***  
biology of 410  
descriptions of 410  
in USSR 410
- Aedes canadensis***  
breeding places of 2063  
control of, insecticides for 1822  
*Entomophthora aquatica* in 1563  
in Canada 2063, 2881  
in caribou hoofprints, in Quebec 2063
- Aedes cantans***  
*Amblyospora opacita* in, pathogenicity of 402  
control of  
biological 1249, 1250  
insecticides for 387, 828, 2942
- Aedes cantans* contd.**  
in Czechoslovakia 387, 2942  
in German Federal Republic 1250  
in USSR 841, 1079  
in floodland forests, in Belorussia 841  
in river floodplains, in Belorussia 841  
group of, oviposition sites of 2591
- Aedes cantator***  
cytoplasmic polyhedrosis virus in, in Connecticut 2893  
in USA 2893  
*Romanomeris nielsenii* in, development of 1817
- Aedes caspius***  
breeding places of 403  
control of 2954, 3265  
biological 1711, 3298  
growth regulators for 1710  
insecticides for 2886  
dominant lethals in, induced by  $\gamma$ -irradiation 2634  
egg-hatch in, effects of dissolved oxygen on 55  
gonads in, effects of  $\gamma$ -irradiation on 2636  
in Czechoslovakia 1560  
in France 2954, 3265  
in USSR 403, 3263  
larval diet of 3263  
mating competitiveness in, effects of  $\gamma$ -irradiation on 2635  
mating flight in 822  
population dynamics of 403  
Tahyna virus in, in Czechoslovakia 1560
- Aedes caspius dorsalis* (see *A. dorsalis*)**
- Aedes cataphylla***  
*Amblyospora opacita* in, pathogenicity of 402  
in USSR 2588  
in reservoir lakes, in Tuva ASSR 2588
- Aedes cinereus***  
control of, repellents for 3230  
flight sounds in 594  
in Canada 2881  
in Czechoslovakia 3230  
in USA 1805  
in USSR 1548  
on cattle, in Czechoslovakia 3230  
oviposition sites of 2591  
complex of 2073
- Aedes cinereus hemiteles***, taxonomy of 2073
- Aedes communis***  
breeding places of 603  
flight sounds in 594  
*Hydromermis* spp. in, in Kazakhstan 88  
in Canada 2881  
in Finland 2957  
in Japan 603  
in USA 2933  
in USSR 88, 841, 1548, 2594  
in alder bogs, in Belorussia 841  
in fir forests, in Belorussia 841  
in snow pools, in Hokkaido 603  
Johnston's organs in, sound reception by 594  
phenology of 2594  
seasonal abundance of 2933, 2957  
group of, oviposition sites of 2591
- Aedes cooki***  
descriptions of 1236  
in Tonga 1236
- Aedes cyprius***  
in USSR 1079, 2588  
in reservoir lakes, in Tuva ASSR 2588
- Aedes daitensis***  
sp. nov., description of 2947  
in Japan 2947  
in tree holes, in Ryukyu Islands 2947  
on man, in Ryukyu Islands 2947
- Aedes dasyorrrhus***, in Papua New Guinea 833
- Aedes decticus***  
breeding places of 2063  
in Canada 2063  
in caribou hoofprints, in Quebec 2063
- Aedes desmotes***, *Ascocystis culicis* in, development of 1215
- Aedes detritus***  
control of 2954, 3265  
biological 1711, 3297, 3298  
*Empidomeris riouxi* in, in France 58  
*Fusarium oxysporum* in, in Italy 2937
- Aedes detritus* contd.**  
in France 58, 2954, 3265, 3297  
in Italy 2937  
in UK 2381  
in tree holes, in France 3297  
complex of, fecundity in, effects of larval diet on 368
- Aedes dianiaetus***  
flight sounds in 594  
*Hydromermis* spp. in, in Kazakhstan 88  
in USSR 88, 1548  
Johnston's organs in, sound reception by 594
- Aedes dorsalis***  
autogeny in 2052  
California encephalitis virus in  
effects on CO<sub>2</sub> susceptibility of 615  
transovarial transmission of 2082  
control of  
biological 397, 2087  
insecticides for 3210  
water management for 1782  
diapause in 2939  
in France 2052  
in USA 1782, 1790, 2052, 2087, 3204, 3212  
in USSR 2594  
in salt marshes, in California 1782, 2087  
insecticide resistance in, in Utah 3212  
oviposition sites of 2591  
phenology of 2594  
Saint Louis encephalitis, virus in, not transmitted transovarially 1784
- Aedes epactius***  
control of, biological 1829  
gene transfer to *A. atropalpus* from 1195  
mid-gut in, pH in 63  
nuclear polyhedrosis virus in,  
pathogenicity of, age-related changes in 63  
*Romanomeris nielsenii* in, not infective 1817  
Saint Louis encephalitis, virus in,  
transovarial transmission of 1784
- Aedes epactius* × *A. atropalpus***  
autogeny in 2595  
moulting hormones in, activity pattern of 2595
- Aedes euedes***, control of, insecticides for 1822
- Aedes excrucians***  
*Ascocystis culicis* in, in Ukraine 2590  
breeding places of 3271  
control of, insecticides for 1822  
in Japan 3271  
in USSR 1079, 1548, 2590  
in snow pools, in Hokkaido 3271  
*Romanomeris nielsenii* in, pathogenicity of 1817
- Aedes fitchii***, control of, insecticides for 1822
- Aedes flavescens***, in USSR 1079
- Aedes flavipictus***  
breeding places of 603  
*Coelomomyces ponticulus* in, in Japan 588  
*C. stegomyiae* in, in Japan 588  
feeding behaviour in 1559  
in China 1559  
in Japan 588, 603  
in tyres, in Hokkaido 603
- Aedes fulgens***  
in Kenya 2876  
in tree holes, in Kenya 2876
- Aedes furcifer***  
group of  
in Gambia 2037, 2038  
on man, in Gambia 393
- Aedes geniculatus***  
*Ascocystis culicis* in, in Ukraine 2590  
in USSR 2590
- Aedes haworthi***  
in Kenya 54  
in *Pandanus rabaiensis* axils, in Kenya 54
- Aedes hebrideus***  
in Papua New Guinea 833  
on man, in Bismarck Archipelago 833
- Aedes hexodontus***  
breeding places of 2063, 2957, 3271  
in Canada 2063  
in Finland 2957

- Aedes hexodontus* contd.  
in Japan 3271  
in caribou hoofprints, in Quebec 2063  
in snow pools, in Hokkaido 3271
- Aedes implicatus*, taxonomy of, synonym of *A. leucomelas* 391
- Aedes intrudens*  
in USSR 1548, 2588  
in reservoir lakes, in Tuva ASSR 2588
- Aedes iriomotensis*  
in Japan 1217  
on man, in Ryukyu Islands 1217
- Aedes japonicus*  
breeding places of 603, 3271  
*Coelomomyces macleayae* in, in Taiwan 2031  
in Japan 603, 3271  
in Taiwan 2031  
in barrels, in Hokkaido 3271  
in tyres, in Hokkaido 603, 3271
- Aedes japonicus shintienensis* (see *A. japonicus*)
- Aedes juppi*  
aestivation in 84  
in South Africa 84, 2139  
on man, in South Africa 84  
on sheep, in South Africa 84  
Rift Valley fever, virus in, transmission of 2139
- Aedes kesseli*  
sp. nov., description of 1236  
in Tonga 1236
- Aedes koreicus*, *Culicinyomys* spp. in, pathogenicity of 1729
- Aedes leucomelas*  
biology of 391  
descriptions of 391  
distribution of 391  
in USSR 1548, 2588  
in reservoir lakes, in Tuva ASSR 2588  
taxonomy of, *Aedes implicatus* as synonym of 391
- Aedes lineatopennis*  
aestivation in 84  
in Kenya 1551  
in South Africa 84, 2139  
on man, in South Africa 84  
on sheep, in South Africa 84  
Rift Valley fever virus in  
in Kenya 1551  
transmission of 2139
- Aedes lineatus*  
in Papua New Guinea 833  
on man, in Bismarck Archipelago 833
- Aedes luridus*  
aestivation in 84  
in South Africa 84  
on man, in South Africa 84  
on sheep, in South Africa 84
- Aedes luteocephalus*  
dengue virus in, in Senegal 1244  
in Gambia 393, 2037, 2038  
in Nigeria 1230, 2895  
in Senegal 1244  
in water containers, in Nigeria 2895  
on man  
in Gambia 393  
in Nigeria 1230
- Aedes malikuli*  
*Coelomomyces* spp. in, in Taiwan 2031  
in Taiwan 2031
- Aedes mariae*  
enzymes in 72  
mating flight in 822  
taxonomy of, relation of *A. zammitii* and 72
- Aedes mascarensis*, developmental abnormalities in, chromosome markers for 593
- Aedes mascarensis* × *A. aegypti* 593
- Aedes melanimon*  
California encephalitis virus in  
effects on CO<sub>2</sub> susceptibility of 615  
transovarial transmission of 2082  
California viruses in, in California 2081  
control of 79  
biological 2121  
insecticides for 2121, 3210  
in USA 79, 2081, 2121  
in pastures, effects of burning on 79  
in wildlife areas, in California 2121
- Aedes melanimon* contd.  
western equine encephalitis, virus in, in California 2081
- Aedes mercurator*  
breeding places of 1818  
in Canada 1818  
in USSR 2588  
in reservoir lakes, in Tuva ASSR 2588
- Aedes metallicus*  
in Gambia 393, 2038  
on man, in Gambia 393
- Aedes mitchellae*  
in USA 2910  
in salt marshes, in South Carolina 2910
- Aedes nigromaculis*  
control of 79  
biological 2084, 2121  
insecticides for 78, 1801, 2111, 2121  
water management for 1801  
in USA 79, 1801, 2084, 2111, 2121, 3212  
in pastures, effects of burning on 79  
in wildlife areas, in California 2121  
insecticide resistance in  
in California 1801  
in Utah 3212
- Aedes nipponicus*  
breeding places of 3271  
in Japan 3271  
in tree holes, in Hokkaido 3271
- Aedes notoscriptus*  
control of, insecticides for 2516  
in Papua New Guinea 833
- Aedes novoniveus*, in China 2605
- Aedes opok*  
chikungunya virus in, in Central African Republic 2066  
in Central African Republic 2066, 3295  
in gallery forests, in Central African Republic 2066  
yellow fever, virus in, in Central African Republic 3295
- Aedes oreophilus*  
breeding places of 3271  
in Japan 3271  
in tree holes, in Hokkaido 3271
- Aedes penghuensis*, in China 2349
- Aedes pionips*  
*Hydromermis* spp. in, in Kazakhstan 88  
in Canada 1809  
in USSR 88  
western equine encephalitis, virus in, in Manitoba 1809
- Aedes polynesiensis*  
autogeny in 2930  
*Brugia malayi* in, infectivity of 2036  
*B. pahangi* in, infectivity of 2036  
dengue virus in, transmission of 115  
preyed on by, *Toxorhynchites brevipalpis* 1231  
*Wuchereria bancrofti* in  
pathogenicity of 121  
permeability of gut to 120  
uptake from man of 2589
- Aedes pseudoscutellaris*  
cell cultures from  
incorporation of labelled metabolites into 1568  
pH variation in 1566  
control of  
insecticides for 412  
sanitation for 412  
Getah virus in, replication of 89  
in Fiji 412  
seasonal abundance of 412  
Semliki Forest virus in, effects of pH on 1567  
West Nile virus in, replication of 89
- Aedes pulchritarsis*, in Czechoslovakia 2065
- Aedes pullatus*  
*Hydromermis* spp. in, in Kazakhstan 88  
in USSR 88
- Aedes punctodes*  
breeding places of 2957  
in Finland 2957
- Aedes punctor*  
breeding places of 603, 2063, 3271  
control of, repellents for 3230  
flight sounds in 594  
*Hydromermis* spp. in, in Kazakhstan 88  
in Canada 2063  
in Czechoslovakia 3230  
in Japan 603, 3271
- Aedes punctor* contd.  
in USSR 88, 841, 1548, 2594  
in alder bogs, in Belorussia 841  
in caribou hoofprints, in Quebec 2063  
in floodland forests, in Belorussia 841  
in river floodplains, in Belorussia 841  
in snow pools, in Hokkaido 603, 3271  
on cattle, in Czechoslovakia 3230  
phenology of 2594
- Aedes riversi*  
in Japan 1217  
on man, in Ryukyu Islands 1217
- Aedes rusticus*  
control of, biological 1250  
in German Federal Republic 1250
- Aedes scapularis*  
in Venezuela 579  
in streams, in Venezuela 579
- Aedes scutellaris*  
in China 1765  
mid-gut in, pH in 63  
taxonomy of 1765  
complex of  
*Brugia* spp. in, inheritance of susceptibility to 2631  
dengue virus in, transmission of 115  
group of, in Tonga 1236
- Aedes sierrensis*  
control of, insecticides for 2108  
diapause in 1544  
effects of photoperiod on 1192  
egg-hatch in, induction of 3245  
in USA 1192, 1544, 2108  
in tree holes, in California 2108  
life-span in, effects of sterilisation on 2100  
mating competitiveness in, effects of sterilisation on 2100  
mating in 2098  
red eye mutant of, genetics of 3240  
Saint Louis encephalitis, virus in, not transmitted transovarially 1784  
sterilisation of, irradiation for 2098
- Aedes simpsoni*  
biology of 591  
in Nigeria 591  
in leaf axils, in Nigeria 591  
on man, in Nigeria 591  
traps for 591  
complex of  
breeding sites of 1116  
in *Colocasia* axils, in Uganda 1116
- Aedes sollicitans*  
baculovirus in, replication of 2882  
control of  
insecticides for 2920, 3228  
water management for 3228, 3279  
in USA 1805, 2910, 3228, 3279  
in dredgings, in South Carolina 2910  
in salt marshes  
in Georgia (USA) 3279  
in Rhode Island 3228  
in South Carolina 2910
- Aedes squamiger*  
control of, water management for 1782  
in USA 1782  
in salt marshes, in California 1782
- Aedes sticticus*  
control of, repellents for 3230  
in Czechoslovakia 3230  
on cattle, in Czechoslovakia 3230  
oviposition sites of 2591
- Aedes stimulans*  
control of, insecticides for 1822  
in Canada 2881  
in USA 2933  
seasonal abundance of 2933
- Aedes stramineus*, mosquito iridescent virus in, histopathology of 3288
- Aedes tabu*, taxonomy of, reduced to subspecies of *A. tongae* 1236
- Aedes taeniorhynchus*  
*Amblyospora polykaryia* in, in Florida 2077  
*Bacillus thuringiensis* in, effects of age on susceptibility to 2042  
Cache Valley virus in, in Jamaica 845  
control of  
biological 2042, 2084  
growth regulators for 1762  
insecticides for 78, 2920  
water management for 3279  
in Jamaica 845



- Aedes taeniorhynchus* contd.**  
 in USA 2077, 2910, 3279  
 in dredgings, in South Carolina 2910  
 in salt marshes  
   in Georgia (USA) 3279  
   in South Carolina 2910  
 regular mosquito iridescent virus in, site  
 of entry of 1819  
*Vavraia culicis* in, infectivity of 2891
- Aedes taylori***  
 group of  
   in Gambia 2037, 2038  
   on man, in Gambia 393
- Aedes togoi***  
 blood-meals in, measuring volume of  
 2909  
*Brelinia booliati* in, effects on adipose  
 tissue of 59  
*Brugia malayi* in  
 counting ingested microfilariae of 2909  
 infectivity of, strain differences in  
 2885  
 transmission of 2906  
*B. pahangi* in, infectivity of, strain  
 differences in 2885  
*B. pateri* in, development of 68  
 chromosomes in 1787  
 control of, biological 397  
*Culicinomyces* spp. in, pathogenicity of  
 1729  
*Dipetalonema dessetae* in, effects on  
 adipose tissue of 59  
 enzymes in 3274  
 extra-jointed palp mutant of 2905  
 hairless-antenna mutant of 2905  
 in Canada 397, 2927  
 in China 2349  
 in South Korea 2122  
 in USA 2927  
 in USSR 1760  
 in rock pools, in Washington State 2927  
 ionic regulation in 857  
 oviposition in, stimulants for 2123  
 pigmented pupa mutant of 2905  
 preyed on by, *Anisogammarus*  
*confervicolus*, in British Columbia  
 397  
*Romanomermis nielseni* in, pathogenicity  
 of 1817  
 ruby-eye mutant of 2905  
 seasonal abundance of 2122  
 white-eye mutant of 2905  
 genetics of 1787
- Aedes tongae tabu***  
 descriptions of 1236  
 in Tonga 1236  
 taxonomy of, reduced from specific rank  
 1236
- Aedes tongae tongae***  
 descriptions of 1236  
 in Tonga 1236
- Aedes triseriatus***  
*Bacillus thuringiensis* in, pathogenicity of  
 2501  
 California encephalitis, virus in, effects on  
 CO<sub>2</sub> susceptibility of 615  
 feeding behaviour in 577, 2935  
 in USA 2900, 2902, 2935, 3280  
 La Crosse virus in  
 effects on feeding of 577  
 in Indiana 2900  
 transmission of, molecular basis of  
 2630  
 on man, in Wisconsin 2935  
 oviposition in 2902  
 population density of 2902  
 preyed on by, *Toxorhynchites rutilus*  
 1242  
 Saint Louis encephalitis, virus in, not  
 transmitted transovarially 1784  
 snowshoe hare virus in, transmission of,  
 molecular basis of 2630  
 traps for 2902, 3280
- Aedes trivittatus***  
*Coelomomyces* spp. in, in Manitoba 622  
 in Canada 622  
 in USA 1790, 2900, 3253  
 Trivittatus virus in, in Indiana 2900
- Aedes vexans***  
 breeding places of 603, 3271  
 collecting of 2597  
 control of 1804  
 insecticides for 387, 1822, 2040, 2942
- Aedes vexans* contd.**  
 control of *contd.*  
 repellents for 3230  
*Culicinomyces* spp. in, pathogenicity of  
 1729  
*Dirofilaria immitis* in  
   in Michigan 378  
   transmission of 600  
 diurnal activity in 2597  
 in Canada 1809, 2060, 2881  
 in Czechoslovakia 387, 1560, 2942, 3230  
 in Japan 603, 3271  
 in South Korea 2122  
 in USA 378, 600, 1789, 1790, 1804,  
 2040, 2041, 2043, 2612, 2933, 3204,  
 3209, 3211, 3212  
 in USSR 2346, 2597  
 in rice-fields, in Hokkaido 603, 3271  
 insecticide resistance in, in Utah 3212  
 larvae of, sampling of 1811  
 on cattle, in Czechoslovakia 3230  
 on man, in USSR 2597  
 oviposition in  
   effects of soil moisture on 3242  
   selection of sites for 2041  
 oviposition sites of 2591, 2612  
 preyed on by, *Gambusia* spp. 2346  
 Saint Louis encephalitis, virus in, not  
 transmitted transovarially 1784  
 seasonal abundance of 2060, 2122, 2597,  
 2933  
 Ťahyňa virus in, in Czechoslovakia 1560  
 Trichomyctes in, in Nebraska 2043  
 western equine encephalitis, virus in, in  
 Manitoba 1809
- Aedes vexans vexans***, in China 2349
- Aedes vittatus***  
 in Gambia 393, 2038  
 on man, in Gambia 393
- Aedes watteni***, in China 2605
- Aedes zammiti***  
 enzymes in 72  
 mating flight in 822  
 taxonomy of, relation of *A. mariae* and  
 72
- Aedinae**  
 California viruses in, in New York State  
 3246  
 predators of, in Nigeria 1113
- Aedius***, taxonomy of 2903
- Aegialidae**, in Saudi Arabia 2529
- aegypti, Aedes**
- Aegyptianella pullorum***  
 cryopreservation of 498  
 in, *Argas walkerae*, multiplication of 498
- aenescens, Cataglyphis***
- aenescens, Ophyra***
- aeneus, Eristalis***
- Aepyceros melampus***  
 arthropod parasites of, in South Africa  
 1888  
 pest control on 1888
- aequatorialis, Cyclops*** (see *Mesocyclops*  
*leuckarti aequatorialis*)
- aequatorialis, Mesocyclops leuckarti***
- Aerobacter***, in, Diptera, in Brazil 479
- Aerobacter cloacae***  
 in  
   *Argas persicus*, in Pakistan 247  
   poultry, pathogenicity of 247
- Aeroplast***, repellent for, Simuliidae, on cattle  
 1288
- Aeshna***, preying on, Culicidae 1038
- Aethechinus algirus***  
*Caparinia algirus* on, in Spain 284  
*Sciuroopsis guevarai* on, in Spain 284
- affinis, Hoplopleura***
- affinis, Phlebotomus*** (see *Sergentomyia*  
*affinis*)
- affinis, Sergentomyia (Phlebotomus)***
- Afghanistan**  
 Acari in 695  
*Anopheles culicifacies* in 2127  
*A. pulcherrimus* in 2127  
*A. stephensi* in 2127  
*Argas hermanni* in, viruses in 695  
 malaria in 2127  
 Siphonaptera in 2029
- Africa**  
 arthropods in, book 775  
 Trombiculidae in, on small mammals  
 1660
- Africa, Central**, human arbovirus diseases  
 in, review 1826
- Africa, West**  
 human arbovirus diseases in, review  
 1826  
 onchocerciasis in 3310  
 sleeping sickness in 1873  
 trypanosomiasis in 1869
- africana, Caridina**
- africana, Mansonia**
- africana, Sergentomyia (Phlebotomus)***
- africanus, Aedes***
- africanus, Phlebotomus*** (see *Sergentomyia*  
*africana*)
- Afrolabidocarpus***, taxonomy of 2484
- Afrolabidocarpus longipes***  
 sp. nov., description of 2484  
 in Indonesia 2484  
 on *Hippisideros galeritus*, in Sumatra  
 2484
- Afrolabidocarpus vietnamensis***  
 sp. nov., description of 2484  
 in Vietnam 2484  
 on *Hippisideros pratti*, in Vietnam 2484
- Afro-tropical region** (formerly Ethiopian  
 region)  
*Cheyletus* spp. in 733  
*Haemolaelaps* spp. in 3422  
 malaria in 3195  
 Phthiraptera in, on vertebrates, book  
 1177
- Agama, Transcaucasian, Ornithodoros** spp.  
 on, in Georgia (USSR) 3408
- Agar**, diet component for, *Musca domestica*  
 3356
- Agelaius phoeniceus***  
 arthropod parasites of  
   in Arkansas 4  
   in Manitoba 4  
 arthropods in nests of, in Manitoba 864
- Aggregation pheromones**  
*Blaberus craniifer* 2560  
*Hyalomma dromedarii* 1648  
*Ixodes persulcatus* 721  
*I. ricinus* 721  
*Lardoglyphus konoi* 3424  
*Vespa crabro* 1631
- agilis, Laelaps**
- Aging**  
*Calliphora vicina*, mimicking by  $\gamma$ -  
 radiation of 219  
*Musca domestica* 1351  
 lipofuscins as indicator of 460
- agrariusia, Gahrlepie**
- Agricultural buildings**, pest control in,  
 insecticide duster for 1601
- Agrotis ipsilon, Bacillus thuringiensis***  
 exotoxins in, toxicity of 197
- Agrotis segetum***  
 enzymes in 748  
 insecticides in, acetylcholinesterase  
 inhibition by 748
- agyrtes, Ctenophthalmus***
- Ahaimophaga alpestris***, in USSR 1067
- Aino virus**, in, livestock, in Australia 2652
- Air**, chemosterilants in, determination of  
 2272
- Aircraft**  
 insect control in, permethrin for 2516  
 mosquito control in 370, 3200  
 pest control in 1145
- A13-20573-b** (see Acetamide, 2-[(4-  
 methoxyphenyl)methoxy]-N,N-dipropyl-)
- A13-36326-b** (see Cyclohexanecarboxamide,  
 N,N-dipropyl-)
- A13-50172** (see 1-Aziridinecarboxamide,  
 N,N'-1,6-hexanedithiolbis-)
- A13-62488** (see Phosphinothioic amide, P,P-  
 bis(1-aziridinyl)-N-cyclohexyl-)
- Akabane virus**  
 in  
   cattle, in Queensland 866  
   *Culicoides brevitarsis*, in Queensland  
   866  
   livestock, in Australia 2652
- Akodon arviculoides, Eubrachylaeps***  
*rotundus* on, in Brazil 2491
- Alabama**  
*Aedes trivittatus* in 3253  
*Stomoxys calcitrans* in 904
- alactagalis, Ornithodoros***

## L-Alanine

- in *Anopheles stephensi*, effects of  
*Plasmodium berghei* on 1199  
 in *Psoroptes cuniculi* 2486  
 in *Psoroptes ovis* 2486

## Alarm pheromones

- Aleuroglyphus ovatus* 1652  
*Carpoglyphus lactis* 1652  
*Dermatophagoides farinae* 1652  
*Lardoglyphus konoï* 1652  
*Monomorium pharaonis* 229  
*Tyrophagus putrescentiae* 1652, 3425

## Alaska

- Ceratophyllus* spp. in, in *Riparia riparia*  
 nests 2303  
 Siphonaptera in 2330  
 bacteria in 2322  
 on birds 1187  
 on mammals 2584

alaskaensis, *Culiceta*

## Alaudidae

- arthropod parasites of, in Kirghizia 1033  
 bacteria in, in Kirghizia 1033

alba, *Orthopodomyia*

## Alba super

- against  
*Anopheles atroparvus* 75  
*Culex molestus* 75

Albania, *Haematopota csikii* in 17albor, *Arrenurus*

## Alberta

- Ceratopogonidae* in, on cattle 1287  
*Culicidae* in  
 natural enemies of 2931  
 on cattle 1287  
*Hypoderma bovis* in, on cattle 3329  
*H. lineatum* in, on cattle 3329  
 insect pests in 782  
*Odocoileus hemionus* in, arthropod  
 parasites of 556  
*O. virginianus* in, arthropod parasites of  
 556  
*Ornithodoros concanensis* in, on *Falco*  
 954  
*O. kelleyi* in, in bat roosts 954  
 Simuliidae in, on cattle 1288, 1289  
*Simulium* spp. in, on cattle 1286, 1287  
*S. arcticum* in 1270, 1271, 1272, 1291,  
 1292  
 Tabanidae in, on cattle 1287

albiceps, *Chrysomya*albiceps, *Sarcophaga*albifrontalis, *Calliphora*albianus, *Anopheles*albipictus, *Dermacentor*albitarsis, *Anopheles*albivirgatum, *Simulium*albolateralis, *Aedes*alboniveus, *Aedes*albopictus, *Aedes*albopunctata, *Sepsis*Albumins, diet component for, *Glossina*

## palpalis 645

## Albumins, blood serum

- in camel, effects of *Haematopinus*  
*tuberculatus* on 1175  
 in *Glossina morsitans* diet, uptake from  
 mid-gut of 1092  
 in *Glossina palpalis* diet  
 effects on fecundity and progeny weight  
 of 439  
 needed for reproduction 2158  
 requirement for 1105, 2402

Alca torda, *Ixodes uriae* on, in Norway

## 702

alcasidi, *Aedes*Alcohols, in *Periplaneta americana*, effects

## on mechanoreceptors of 1735

## Aldolase, fructose diphosphate, in fowl,

## effects of dichlorvos on 2564

## Aldrichina grahmi

- control of, growth regulators for 464  
 enzymes in 186, 685, 3366  
 fat-body in, arginine transport in 2190  
 methoprene in, development inhibition by  
 464  
 microbodies in 3366  
 proline in, synthesis of 684

Aldrin ((1 $\alpha$ ,4 $\alpha$ ,4 $\beta$ ,5 $\alpha$ ,8 $\alpha$ ,8 $\beta$ )-

- 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-  
 hexahydro-1,4:5,8-dimethanonaphthalene)  
 in *Musca domestica*, enzyme inhibition by  
 879

## Aldrindiol (see 1,4:5,8-

- Dimethanonaphthalene-2,3-diol,  
 5,6,7,8,9,9-hexachloro-1,2,3,4,4a,5,8,8a-  
 octahydro-)

Alectoris rufa, *Knemidokoptes mutans* on,  
 in Spain 3419Alectorobius tartakovskyi (see *Ornithodoros*  
*tartakovskyi*)Alectorobius tholozani (see *Ornithodoros*  
*tholozani*)

## Aleochara moesta

- descriptions of 3344  
 life history of 3344

parasitising, *Musca domestica* 3344preying on, *Musca domestica* 3344Aleocharinae, in poultry dung, in North  
 Carolina 226Aleurobius farinae (see *Acarus siro*)

## Aleuroglyphus ovatus

- aggregation in, caused by *Lardoglyphus*  
*konoï* pheromone 3424

## alarm pheromone in 1652

## antigens of 3097

alexandri, *Phlebotomus*alexis, *Onitis*

## Alfalfa (see Lucerne)

alfreddugesi, *Eutrombicula*

## Algae

- Culicid* larvae eating 3263  
 diet component for, *Forcipomyia taiwana*  
 418

Algeria, *Phlebotomus sergenti* in, natural  
 enemies of 2660algericus, *Laelaps*aligus, *Caparinia*

## Alkanes

- in insect cuticular wax, analysis of 2277  
 in *Nauphoeta cinerea* cuticle, wing-raising  
 caused by 785

Alkenes, in *Musca domestica* cuticle 2706Allactaga severtzovi, *Leishmania major* in,  
 not infective for *Phlebotomus papatasi*  
 2146Allantonematidae, in, *Polygenis tripus*, in

## Brazil 3185

## Allergens

- of *Cladotanytarsus lewisi* 2192  
 of *Culex quinquefasciatus* 2132  
 of *Dermatophagoides* 2489  
 of *Dermatophagoides pteronyssinus* 986,  
 987, 2492, 3111  
 of house dust 517  
 role of mites in 923, 1654, 1955  
 of *Musca domestica* 2132  
 standardisation of preparations of 3106,  
 3107

## Allergy (see Hypersensitivity)

Allethrin (2-methyl-4-oxo-3-(2-propenyl)-2-  
 cyclopenten-1-yl 2,2-dimethyl-3-(2-  
 methyl-1-propenyl)cyclopropanecarboxy-  
 late)

- against, *Panstrongylus megistus* 1507  
 repellent for, *Aedes aegypti* 2347  
 resistance to, in, *Culex quinquefasciatus*  
 2353

## (1R-trans)-

## against

*Blattella germanica* 1144*Musca domestica* 1144*Panstrongylus megistus* 1507in *Rhodnius prolixus*, effects on  
 neurosecretory system of 1182

## repellent for

*Aedes aegypti* 2347*Panstrongylus megistus*, on rat 39[1R-[1 $\alpha$ (S'),3 $\beta$ ]]-in *Periplaneta americana*, neurotoxicity  
 of 3435

## knockdown activity of 1144

repellent for, *Aedes aegypti* 2347with bioresmethrin, against, *Aedes*  
*aegypti* 1245

## d-trans-Allethrin (see Allethrin, (1R-trans)-)

*Allium sativum* (see Garlic)

## Allophysalis

## in China 972

## taxonomy of 241

allosem, *Leptotrombidium*

- Alona*, in water supply, effects of permethrin  
 on 2713

## Alopecia

- in guinea-pig  
 caused by *Cheyletiella parasitivorax*  
 2774  
 caused by *Trixacarus caviae* 510, 1978  
 in rabbit, caused by *Cheyletiella*  
*parasitivorax* 2774  
 in sheep 503  
 in *Uncia uncia*, caused by *Demodex cati*  
 2234  
 in zebu, caused by mites 2538

alpestre, *Prosimulium* (see *Ahaimophaga*  
*alpestris*)alpestris, *Ahaimophaga* (*Prosimulium*)Alphavirus, in, *Culicidae*, in French Guiana  
 1154

## Alphitobius diaperinus

- biology of 2204  
 control of, insecticides for 486, 687  
 development in, effects of temperature on  
 2204

## enzymes in 2204

## illustrations of 486

## in Austria 687

## in Japan 2204

## in UK 486

## in USA 226

## in dwellings, in England 486

## in fowl housing

## in Austria 687

## in Japan 2204

## in poultry dung

## in England 486

## in North Carolina 226

Alternaria, in, *Culicidae*, in Ukraine 1025,  
 1757alternata, *Psychoda*

## Alticola stoliczkanus

*Amphipsylla kulkarnii* on, in Nepal 3186*Genoneopsylla angustidigita* on, in China  
 2864alticollis, *Aclista*

## Altosand (see Methoprene)

## Altosid (see Methoprene)

## Altozar (see Hydroprene)

## Alugan (see Bromocyclen)

Aluminum, in *Simulium* breeding water  
 2666Alveonassus lahorensis (see *Ornithodoros*  
*lahorensis*)

## Alzogur (see Cyanamide)

## Amalaraeus penicilliger

## in USSR 2871, 3184

## on rodents, removal by host of 2342

## on small mammals

## in Siberia 3184

## in USSR 2871

## Amalaraeus penicilliger dissimilis

## in USA (Alaska) 2322

on *Microtus oeconomus*, in Alaska 2322*Pasteurella tularensis* in, in Alaska 2322Amanella emergens (see *Cydistomyia*  
*emergens*) $\alpha$ -Amanitin, in *Aedes aegypti*, preventing

## digestion of blood-meals 1527

## Amaranth (dye), use in determining insect

## blood-meal size 1913

amazonensis, *Lutzomyia* (*Phlebotomus*;*Psychodopygus*)amazonensis, *Mansonia*amazonensis, *Phlebotomus* (see *Lutzomyia*  
*amazonensis*)amazonensis, *Psychodopygus* (see*Lutzomyia amazonensis*)amazonicum, *Simulium*ambus, *Ornithodoros*

## Amblycera, on vertebrates, in Afrotropical

## region, book 1177

## Amblyomma

## arboviruses in, transmission of 1826

## attraction in 1722

## Congo virus in, transmission of 1945

## control of 1480

*Dermatophilus congolensis* in,

## transmission of 777

## in Indonesia 925

## on cattle, in Nigeria 245

## on livestock, in Mongolia 1480

*Theileria mutans* in, transmission of 936,  
 942

## Amblyomma americanum

## carbon dioxide in, responses to 604



- Amblyomma americanum** *contd.*  
 control of  
   acaricides for 1937, 3059  
   evaluating of 974  
   repellents for 1937  
 development in  
   effects of host on 1936  
   effects of humidity on 2738  
   effects of temperature on 2738  
 egg production efficiency in, effects of  
   engorgement weight on 2464  
 fecundity in, effects of host on 1936  
 in USA 1398, 1936, 2209, 2465, 3059  
 on *Bos indicus* × *B. taurus*, in Oklahoma 1936  
 on cattle, in Oklahoma 1936  
 on guinea-pig, feeding sites of 252, 710  
 on man, in Connecticut 1398  
 on wildlife, in Oklahoma 2465  
 preyed on by, *Solenopsis invicta*, in Louisiana 2209  
 rearing of, techniques for 2467  
 traps for 604
- Amblyomma cajennense**  
 aggregation in 1460  
 control of 1126  
 in Jamaica 845, 2463  
 in Mexico 1126, 1460  
 on cattle  
   distribution pattern of 1126  
   in Mexico 1460  
 on donkey, in Jamaica 2463  
 on man, in Jamaica 2463  
 Wad Medani virus in, in Jamaica 845
- Amblyomma cyprinum**  
 in Australia 16  
 on pig, in Queensland 16
- Amblyomma gemma**  
*Cowdria ruminantium* in, transmission of 958  
*Theileria mutans* in, transmission of 2474
- Amblyomma hebraeum**  
 control of, acaricides for 757  
*Cowdria ruminantium* in  
   in South Africa 945  
   transmission of 958  
 enzymes in 2740  
 in South Africa 757, 945, 1645  
 in Zimbabwe 937  
 on cattle  
   in South Africa 945, 1645  
   in Zimbabwe 937  
 on rabbit, effects of 2214  
 preyed on by, *Buphagus erythrorhynchus* 1643  
 salivary glands in 2477  
   hormonal regulation of degeneration of 2749  
 sex pheromone of 1405  
 spermatozoa in 497
- Amblyomma lepidum**  
 control of, acaricides for 703  
*Cowdria ruminantium* in, transmission of 958  
 in Tanzania 703
- Amblyomma maculatum**  
 carbon dioxide in, responses to 604  
 in USA 1398  
 on domestic animals, in Connecticut 1398  
 sex pheromone of, responses to 926  
 water balance in 1644
- Amblyomma pomposum**, *Cowdria ruminantium* in, transmission of 958
- Amblyomma tholloni**, sex pheromone of 1405
- Amblyomma variegatum**  
 acaricide resistance in, in Tanzania 703  
 Bhanja virus in, in Kenya 1641  
 control of  
   acaricides for 703  
   grasses for 1722  
*Cowdria ruminantium* in, transmission of 958  
 Dugbe virus in, in Kenya 1641  
 eclosion in 500, 1108  
 in Antigua 958  
 in Central African Republic 1411  
 in French West Indies 958  
 in Kenya 1641  
 in Malagasy Republic 3060  
 in Nigeria 1108, 3415
- Amblyomma variegatum** *contd.*  
 in Réunion 958  
 in Tanzania 703  
 in Virgin Islands 958  
 Nairobi sheep disease, virus in, in Kenya 1641  
 nervous system in 1944  
 on cattle  
   in Central African Republic 1411  
   in Kenya 1641  
   in Nigeria 1108, 3415  
 on goat, in Malagasy Republic 3060  
 on sheep, in Malagasy Republic 3060  
 oviposition in 500, 1108, 3415  
 sex pheromone of 1405  
*Theileria mutans* in, development of 499  
 Thogoto virus in, in Kenya 1641  
 veterinary importance of 3060  
 yellow fever, virus in, in Central African Republic 1411
- Amblyomminae**, sex pheromones of 2744
- Amblyospora bracteata**  
 in  
   Simuliidae  
     in Guatemala 144  
     in Ukraine 1059  
   *Simulium* spp., in German Federal Republic 1268
- Amblyospora minuta**, in, *Aedes* spp., in Ukraine 1025
- Amblyospora opacita**  
 in  
   *Aedes* spp., in Ukraine 1025  
   *A. cantans*, pathogenicity of 402  
   *A. cataphylla*, pathogenicity of 402
- Amblyospora polykarya**  
 sp. nov., description of 2077  
 in, *Aedes taeniorhynchus*, in Florida 2077  
 life-cycle of 2077
- amboinensis**, *Toxorhynchites*
- Ambrosia artemisiifolia**, on man, hypersensitivity to 3112
- ambulans**, *Haemogamasus*
- America, Central**, Atopomelidae in 286
- America, North**  
 acarologists in, directory 2269  
 Chloropidae in 1832  
 entomologists in, directory 2269
- America, South**, Atopomelidae in 286
- American Samoa**, *Aedes* spp. in 1236
- americana**, *Periplaneta*
- americanum**, *Amblyomma*
- americanus**, *Dermanyssus*
- americanus**, *Leptinus*
- Ameroseius corbicula**  
 in Bulgaria 1659  
 on small mammals, in Bulgaria 1659
- Amines**, in insect nervous system 1159
- Amino acid oxidase** (see Oxidase, amino acid)
- Amino acids**  
 in *Aedes aegypti*, not affected by polluted water 3273  
 in *Calliphora vicina* hemolymph, developmental changes in 882  
 in *Culex pipiens* hemolymph, effects of *Romanomeris culicivora* on 1229  
 in *Culex quinquefasciatus*, not affected by polluted water 3273  
 in *Glossina morsitans* diet, absorption by mid-gut of 2159  
 in *Heterometrus scaber* venom 3434  
 in mosquito cell lines, incorporation of 1568  
 in *Periplaneta americana*, effects of thermal acclimation on 1490  
 in *Psoroptes cuniculi* 2486  
 in *Psoroptes ovis* 2486  
 in *Rhodnius prolixus* hemolymph, retention during diuresis of 809
- Aminopeptidase**  
 in *Haematobia irritans* gut 3369  
 in *Haematobia irritans* salivary glands 3369  
 in *Stomoxys calcitrans* gut 3369  
 in *Stomoxys calcitrans* salivary glands 3369
- Aminophylline**, in *Musca domestica*, effects on pupariation of 188
- Aminotransferase, alanine**  
 in *Culex quinquefasciatus* larvae, insecticide inhibition of 2352
- Aminotransferase, alanine** *contd.*  
 in fowl, effects of dichlorvos on 2564  
 isoenzymes, in *Hyalomma*, use in taxonomy of 934
- Aminotransferase, aspartate**  
 in *Culex quinquefasciatus* larvae, insecticide inhibition of 2352  
 in fowl, effects of dichlorvos on 2564  
 in Phlebotominae, use as taxonomic character of 2967  
 isoenzymes, in *Hyalomma*, use in taxonomy of 934
- Amitermes wheeleri**  
 food location by 2729  
 in USA 2729  
 in cattle dung, in New Mexico 2729
- Amitraz** (*N'*-(2,4-dimethylphenyl)-*N*-[(2,4-dimethylphenyl)imino]methyl]-*N*-methylmethanimidamide)  
 against  
   *Boophilus microplus* 939  
   *Demodex canis*, on dog 2766  
   *D. folliculorum*, on dog 1665  
   *Rhipicephalus appendiculatus*, on cattle 2737  
   *Sarcoptes scabiei*, on pig 1661  
 in *Buphagus erythrorhynchus*, toxicity of 1643  
 in cattle, residues of 696
- Ammonia**  
 in cattle dung  
   effects of *Haematobia irritans* on loss of 2425  
   effects of *Onthophagus gazellus* on loss of 2425  
 in *Rhipicephalus sanguineus*, receptors for 976
- Ammonium**, in *Simulium* breeding water 2666
- Amoebidium**, in, Culicidae, in Nebraska 2043
- Amoebina**, in, insects 3136
- amoreuxi**, *Androctonus*
- Amorphacarus**, on *Sorex bendirii*, in Oregon 509
- Ampelodesma mauritanicum**, *Haemaphysalis punctata* on, in Italy 3062
- Amphalius manosus**  
 sp. nov., description of 568  
 in China 568  
 on small mammals, in Yunnan 568
- Amphallius runatus**  
 in USSR 3184  
 on small mammals, in Siberia 3184
- Amphibia**  
*Bacillus thuringiensis* in, pathogenicity of 2086  
 Diptera on, in Ukraine 1024  
 neem extracts in, toxicity of 3216  
*Ornithodoros* spp. on, in Georgia (USSR) 3408  
 Phlebotominae on, in Panama 2150
- Amphipoda**, on *Ecklonia*, development of 2439
- Amphipsylla**  
 on Rodentia, in Himalayas 3186  
 taxonomy of 3186
- Amphipsylla kulkarnii**  
 sp. nov., description of 3186  
 in Nepal 3186  
 on Rodentia, in Nepal 3186
- Amphipsylla primaris mitis**  
 in USSR 1026  
 on *Microtus brandti*, in Transbaikalia 1026
- Amphipsylla qinghaiensis**  
 sp. nov., description of 567  
 in China 567  
 on small mammals, in China 567
- Amphipsylla rossica**  
 biology of 2579  
 in USSR 2579  
 on *Microtus arvalis*, development of 2579
- Amphipsylla sibirica**  
 in USSR 2871  
 on small mammals, in USSR 2871
- Amphipsylla sibirica sibirica**  
 in USSR 3184  
 on small mammals, in Siberia 3184
- Amylase**  
 in *Alphitobius diaperinus* 2204  
 in *Haematobia irritans* gut 3369

- Amyloidosis**, in rabbit, caused by *Hyalomma impressum* 1939
- Amyrsidea powelli**  
in Nigeria 1493, 2013, 2569  
on fowl, in Nigeria 1493, 2013  
on guineafowl, in Nigeria 1493, 2569
- Ananas comosus** (see Pineapple)
- Anaphylaxis**  
in cattle, caused by Simuliidae 1289  
in man, caused by *Vespula* 1386  
to insect stings, in man 1630
- Anaplasma**  
control of 2224  
vector control for 943  
epidemiology of 3393  
in  
*Boophilus microplus*, transmission of 2832  
cattle  
in Costa Rica 3393  
in Mexico 1640  
in South Africa 2224
- Anaplasma marginale**  
control of 943, 949, 950  
vector control for 236  
in  
*Boophilus microplus*, transmission of 938, 949, 961, 2836, 2837, 3060  
*Bos taurus* × *B. indicus*, in Queensland 961  
cattle  
in Colombia 236  
in Queensland 949  
in South Africa 950  
in Spain 3078  
in USA 943  
in Zimbabwe 937
- Dermacentor andersoni**, morphology of 2222
- D. variabilis**  
detecting of 2223  
morphology of 2222  
trans-stadial transmission of 2223
- Rhipicephalus simus**, in males 3082  
zebu, in Australia 938  
vectors of 943, 950
- Anaplasmosis**, in Philippines 2804
- Anastomus oscitans**, *Argas robertsi* on, in Thailand 2815
- Anastrepha**, on man, in Costa Rica 1344
- Anaticola**  
biology of 2567  
in Yakutia 2567
- Anatidae**  
arthropod parasites of, in Kirghizia 1033  
bacteria in, in Kirghizia 1033
- anatolica**, *Kayella*
- anatolicum**, *Hyalomma*
- Ancystropus**, in Philippines 3416
- andersoni**, *Dermacentor*
- Andorra**, Siphonaptera in, on small mammals 2340
- Androctonus amoreuxi**, venom of 306
- Androctonus australis**  
activity in, rhythm of 315  
hemocyanins in 2779  
in Tunisia 2256  
on man, cardiovascular effects of stings by 2256  
temperature preferences in, effects of prostaglandins on 3116  
venom of, toxins in 742
- Androctonus mauretanicus**  
hemolymph in 2253  
in Morocco 2252  
venom of 2252, 2253  
fractionation techniques for 2254
- Androlaelaps**  
in rodent nests, in Transbaikalia 1032  
on *Suncus murinus*, in Burma 2775
- Androlaelaps fahrenholzi**  
blood-meals in, identification of 1954  
in Bulgaria 1659  
in Hungary 2244  
in USA 509, 2249, 2302  
in USSR 1032  
in rodent nests, in Transbaikalia 1032  
on *Apodemus agrarius*, feeding by 1954  
on *Didelphis virginiana*, in Oregon 2302  
on *Dipodomys ordii*, in Oregon 2249  
on *Perognathus parvus*, in Oregon 2249  
on small mammals, in Bulgaria 1659  
on *Sorex*, in Oregon 509
- Androlaelaps fahrenholzi** contd.  
*Rickettsia prowazekii* in, not transmitted 3066  
seasonal abundance of 1659
- Androlaelaps pavlovskii**  
in USSR 1032  
in rodent nests, in Transbaikalia 1032
- Anemia**  
in Asian buffalo, caused by *Haematopinus tuberculatus* 2250  
in *Bos taurus* × *B. indicus*, caused by *Chrysomya bezziana* 663  
in cattle, caused by *Trypanosoma* 1298, 1299, 1305  
in rabbit, caused by *Amblyomma hebraeum* 2214  
in zebu, caused by ticks 2538
- Anesthetics**, for *Cochliomyia hominivorax*, exhaust gases as 2434
- Aneuopria foersteri**  
in Romania 453  
parasitising, *Piophilha casei*, in Romania 453
- Angelica japonica**, antifedant activity of extracts of 317
- angiods**, *Laelaps*
- Angiotensin I-converting enzyme** (see Carboxypeptidase, dipeptidyl)
- Angola**, *Culex* spp. in 2638
- angustati**, *Depressaria*
- angustidigita**, *Genoneopsylla*
- angustipennis**, *Hydropsyche*
- angustitarse**, *Chelocnetha* (see *Simulium angustitarse*)
- angustitarse**, *Cnetha* (see *Simulium angustitarse*)
- angustitarse**, *Eusimulium* (see *Simulium angustitarse*)
- angustitarse**, *Simulium* (*Chelocnetha*; *Cnetha*; *Eusimulium*)
- angustus**, *Ixodes*
- anhuiensis**, *Chiroptella*
- Aniline** (see Benzenamine)
- anilis**, *Dryomyza*
- Animal burrows**, *Phlebotomus major* in, in Sinkiang-Uighur 421
- Animal housing**  
*Anopheles superpictus* in, in Italy 770  
*Cimex lectularius* in, in Andhra Pradesh 2562  
fly control in 199  
*Musca domestica* in, in Italy 657  
pest control in, insecticide mist generator for 3351  
Phlebotominae in, in Italy 764  
*Phlebotomus chinensis* in, in China 868
- Animal wastes**, conversion to feedstuffs of 2710
- Anisogammarus confervicolus**  
in Canada 397  
preying on, *Aedes togoi*, in British Columbia 397
- Annelida** 1153, 1917, 1987, 2710, 3024, 3148  
*Rhynchelmis* 2942  
*Tubifex* 2942  
*T. tubifex* 3213
- Annelids**  
in, man, book 1153  
index-catalogue 3148  
pesticides in, non-target effects of 1987
- Annual reports (1977)**  
Department of Veterinary and Tsetse Control Services, Zambia 1333  
Kenya Agricultural Research Institute 1722  
Ministry of Agriculture and Fisheries, Fiji 1658  
Ministry of Agriculture and Natural Resources and the Environment, Mauritius 224  
National Museum of Natural History, Leiden 1719
- Annual reports (1977–78)**, CSIRO Division of Entomology 18
- Annual reports (1978)**  
CSIRO Division of Animal Health 779  
Ministry of Health, Cyprus 370
- Annual reports (1978–79)**  
CSIRO Division of Entomology 19  
Department of Agricultural Research and Education, India 962
- Annual reports (1978–79)** contd.  
Department of Primary Industries, Queensland 16
- Annual reports (1979)**  
Agricultural Research Council, Zimbabwe 1405  
Agricultural Science Service, UK 3048  
Agriculture Canada, Research Branch 2510  
Centre de Recherches Agronomiques de l'État, Belgium 2762  
Centre de Recherches sur les Trypanosomes Animales, Upper Volta 3004  
Danish Pest Infestation Laboratory 1479  
Department of Agriculture, Northern Ireland 2212  
Department of Medical Services, Ministry of Health, Cyprus 3267  
Edinburgh School of Agriculture 2761  
Entente Interdépartementale pour la Démoustication du Littoral Méditerranéen, France 2954, 2955  
Hawaiian Sugar Planters' Association 1802  
International Centre of Insect Physiology and Ecology, Kenya 15  
James Cook University of North Queensland 2836  
Secretary for Health, Zimbabwe 2006  
South African Institute for Medical Research 1478  
Tsetse Research Laboratory, UK 871
- Annual reports (1979–80)**  
Agricultural Research Council, UK 2650  
CSIRO Division of Animal Health 2832  
CSIRO Division of Entomology 2831  
London School of Hygiene and Tropical Medicine 2381
- Annual reports (1980)**  
Entente Interdépartementale pour la Démoustication du Littoral Méditerranéen, France 3265, 3266  
Tsetse Research Laboratory, UK 3003
- annularis**, *Anopheles*
- annulata**, *Culiseta*
- annulatus**, *Boophilus*
- annulifera**, *Mansonia*
- annulirostris**, *Culex*
- annulus**, *Culex* (see *C. vishnui*)
- Anobium punctatum**  
in Singapore 1657  
in furniture, in Singapore 1657  
parasitised by, *Pyemotes ventricosus*, in Singapore 1657
- Anocentor nitens**  
control of, acaricides for 2218  
in Colombia 2218  
in Jamaica 2463  
on cattle, in Colombia 2218  
on donkey, in Jamaica 2463
- Anoediopora**, taxonomy of 2903
- Anoetidae**, in mammal nests, in USSR 1053
- Anomiopsyllinae**, taxonomy of 1750
- Anopheles**  
arboviruses in, transmission of 1826  
*Bacillus sphaericus* in, in Pondicherry 2622  
behaviour in 1248  
Cache Valley virus in, in New York State 3246  
collections of, in Oswaldo Cruz Foundation, Brazil 1016  
control of 3194, 3265  
biological 1249, 1537, 2346, 3136, 3200  
for malaria control 1778, 2285, 2372, 2380  
genetic 3140  
insecticides for 86, 1075, 1218, 1248, 1708, 2006, 2039, 2057, 3200, 3267  
evaluating of 94  
electrophoresis for studying 70  
flight speed in 2363  
fungi in, in USSR 1019  
hybrid sterility in 2405  
in Afrotropical region 3195  
in Argentina 400  
in Azerbaijan 852  
in Canada 1533  
in Canary Islands 2071  
in China 2880



- Anopheles contd.**  
 in Cuba 849  
 in Finland 2957  
 in France 3198, 3265  
 introductions of 3200  
 in Gambia 2363  
 in Hokkaido 603  
 in Indonesia 2801  
 in Kwangsi 855  
 in Quebec 2881  
 in Soviet Maritime Territory 3264  
 in Spain 2941  
 in Switzerland 3215  
 in cattle housing, in Ukraine 1075  
 in forests, in Belorussia 1058  
 in *Pandanus rabaiensis* axils, in Kenya 54  
 insecticide resistance in 2285, 3194  
 in Thailand 96  
 Japanese encephalitis, virus in, in China 1827  
 larvae of, distinguishing instars of 2611  
 mating in 1766  
*Nosema* spp. in 3136  
 parasitised by, water mites, in Quebec 2354  
*Parateloahania legeri* in, in Ukraine 1025  
*Plasmodium* spp. in, transmission of 326  
*P. yoelii* in, infectivity of 57  
 predators of, detecting of 1482  
 research on, in UK 840  
 seasonal abundance of 2957  
 taxonomy of 2904  
 isoenzymes as characters for 53
- Anopheles aconitus**  
 chromosomes in 1558  
 in Indonesia 1777, 2127  
 in Philippines 2127  
 in Thailand 2904  
 insecticide resistance in 2127
- Anopheles albimanus**  
*Bacillus sphaericus* in, pathogenicity of, effects of larval behaviour on 3260  
*B. thuringiensis* in, pathogenicity of, not affected by insecticide resistance 2924  
 bibliography 110  
 chromosomes in, paracentric inversions on 1808  
 control of  
 biological 118, 377, 1572, 2924  
 genetic 1808, 3194  
 growth regulators for 1762  
 insecticides for 1816, 2920  
 repellents for 1813  
 sterile-insect release for 846  
 enzymes in 1213  
 in El Salvador 377, 846, 1816, 2127, 3243  
 in Guatemala 2127  
 in Honduras 2127  
 in Nicaragua 2127  
 in cattle housing, in El Salvador 3243  
 insecticide resistance in 2127  
*Plasmodium vivax* in, infectivity of 834, 2896  
 purines in, metabolism of 1213  
 rearing of, techniques for 80, 1815, 2125, 3232, 3236  
 release methods for 846  
 ribonucleosides in, metabolism of 1213  
 sampling of 3243  
 size sorting device for 2126  
 temephos resistance in, in El Salvador 1816  
 transport methods for 846  
*Vavraia culicis* in, infectivity of 2891
- Anopheles albitarsis**, chromosomes in 2899
- Anopheles amictus**, *Culicinomyces clavosporus* in 62
- Anopheles annularis**  
 control of, insecticides for 1775  
 DDT resistance in, in Pakistan 1775  
 dieldrin resistance in, in Pakistan 1775  
 in Indonesia 1777  
 in Pakistan 1775  
 in Philippines 3221  
 Japanese encephalitis, virus in, in Philippines 3221  
 oviposition in, substrate preferences for 2889  
 rearing of, techniques for 2059  
 taxonomy of 108
- Anopheles aquasalis**  
 in French Guiana 1154  
 on man, in French Guiana 1154  
 taxonomy of, relation of *A. darlingi* and 1768
- Anopheles arabiensis**  
*Coelomomyces* spp. in, in Nigeria 767  
 control of 765, 766  
 for malaria control 829  
 insecticides for 829  
 cross-mating of, with  
*Anopheles gambiae* 619  
*A. melas* 619  
 habitats of 765  
 adaptation to 766  
 in Nigeria 765, 766, 767, 829  
 in dwellings, in Nigeria 766, 829  
 in urban areas, in Nigeria 765  
 taxonomy of, characters distinguishing *A. gambiae* and 64
- Anopheles arabiensis** × *A. gambiae* 619
- Anopheles aruni**, chromosomes in 1545
- Anopheles atroparvus**  
*Brugia patei* in, development of 68  
 chromosomes in 2356  
 control of  
 biological 1711  
 detergents for 75  
 insecticides for 75, 2596  
 DDT in, flight activity caused by 2878  
 DDT resistance in, in Caucasus 2596  
 flight activity in, effects of test chamber on 2878  
 habitats of 599  
 in UK 3277  
 in USSR 86, 87, 405, 1041, 1075, 2596  
 in Yugoslavia 599  
 in marshland, in England 3277  
 in rice-fields, in Crimea 87  
 ovarian development in, dependence on mating of 71  
*Plasmodium* spp. in, infectivity of 405  
*P. vivax* in, infectivity of 834
- Anopheles balabacensis**  
 biology of 124  
 habitats of 3194  
 in Laos 2127  
*Plasmodium simium* in, infectivity of 576  
 taxonomy of, *Anopheles takasagoensis* distinct from 2070
- Anopheles balabacensis balabacensis**  
 control of, insecticides for 624, 2055  
 in India 624  
 in Malaysia 2055  
 in dwellings  
 in Arunachal Pradesh 624  
 in Sabah 2055  
 on man, in Arunachal Pradesh 624  
*Plasmodium vivax* in, infectivity of 834, 2896
- Anopheles barbirostris**  
 in India 2620  
 in Indonesia 1777  
 Japanese encephalitis, virus in, in West Bengal 2620  
 taxonomy of, *Anopheles donaldi* misidentified as, in West Malaysia 1799
- Anopheles beklemishevi**, chromosomes in 2356
- Anopheles bradleyi**  
 in USA 2910  
 in salt marshes, in South Carolina 2910
- Anopheles braziliensis**, in French Guiana 1154
- Anopheles claviger**  
 antennae in, sensilla on 2592  
 in France 3199  
 in USSR 1024, 1041, 2346, 2594  
 in Yugoslavia 3285  
 on man, in Ukraine 1024  
 phenology of 2594  
 preyed on by, *Gambusia* spp. 2346
- Anopheles coustani**  
 in Kenya 1551  
 Rift Valley fever, virus in, in Kenya 1551  
 taxonomy of  
 characters distinguishing *A. tenebrosus* and 2946  
 characters distinguishing *A. ziemanni* and 2946
- Anopheles coustani contd.**  
 group of, taxonomy of 1248
- Anopheles crawfordi**  
 taxonomy of  
 misidentified as *A. annularis* 108  
 misidentified as *A. vanus* 108
- Anopheles crucians**  
 in USA 2046  
 parasites of, mortality caused by 2046  
 parasitised by, *Arrenurus pseudotenuicollis*, in Florida 2046
- Anopheles cruzii**  
 behaviour in 1203  
 control of, insecticides for 1203, 1204  
 in Brazil 1202, 1203, 1204  
 in dwellings, in Brazil 1203  
 physiological age in 1202
- Anopheles culicifacies**  
 chromosomes in 81  
 control of  
 evaluating of 2051  
 for malaria control 3217  
 insecticides for 103, 607, 617, 1775, 2382, 3218  
 DDT resistance in 1541, 3218  
 in Andhra Pradesh 607  
 in India 2054  
 in Pakistan 1775  
 dieldrin resistance in  
 in Andhra Pradesh 607  
 in Pakistan 1775  
 eggs of 613  
 fenitrothion resistance in  
 in Gujarat 2382  
 in Maharashtra 2382  
 gonotrophic cycle in 2051  
 homozygous translocation in, isolating of 119  
 in Afghanistan 2127  
 in India 81, 103, 572, 607, 609, 2054, 2382, 3217, 3222  
 in Pakistan 81, 617, 1775, 2938  
 in Sri Lanka 81, 2051, 2382  
 in Thailand 2904  
 in cattle housing, in Rajasthan 609  
 in dwellings  
 in Andhra Pradesh 607  
 in Rajasthan 609  
 insecticide resistance in 2127  
 genetics of 2887  
 life tables for 395  
 malathion resistance in  
 in Andhra Pradesh 607  
 in Gujarat 2382  
 mating competitiveness in, effects of chromosome rearrangements on 2938  
*Plasmodium* spp. in, in Delhi 3222  
*P. simium* in, infectivity of 576  
*P. vivax* in, infectivity of 834, 2896  
 sibling species 3222  
 taxonomy of 2369, 2904  
 sibling species 81  
*Toxogluea* spp. in, in Rajasthan 609  
 white eye mutant of 372
- Anopheles culicifacies adenensis**  
 eggs of 613  
 in Oman 613  
 taxonomy of, synonym of *A. culicifacies* 2904
- Anopheles darlingi**  
 biology of 1793  
 chromosomes in 2899  
 DDT resistance in, in Brazil 1767  
 enzymes in 1768  
 genetic variation in 1768  
 in Brazil 1767, 1793  
 in French Guiana 1154  
 on man, in Brazil 1793  
*Plasmodium* spp. in, transmission of 326  
 population age-structure in 1793  
 taxonomy of  
 relation of *A. aquasalis* and 1768  
 relation of *A. nuneztovari* and 1768
- Anopheles dirus**, chromosomes in 620, 2921
- Anopheles donaldi**  
 in Malaysia 1799  
 in dwellings, in West Malaysia 1799  
 on man, in West Malaysia 1799  
 taxonomy of, misidentified as *A. barbirostris*, in West Malaysia 1799
- Anopheles earlei**  
*Diximeris peterseni* in, in Quebec 1197

- Anopheles earlei** *contd.*  
in Canada 1197, 1809  
*Parathelohania* spp. in, in Quebec 1197  
western equine encephalitis, virus in, in  
Manitoba 1809
- Anopheles farauti**  
breeding places of 1776  
in Indonesia 1776  
in Papua New Guinea 833, 1771  
on man  
in Bismarck Archipelago 833  
in Papua New Guinea 1771  
seasonal abundance of 1771
- Anopheles farauti** No. 2, in Australia 1552
- Anopheles fluviatilis**  
chromosomes in 1558  
control of, insecticides for 2054, 3270  
DDT resistance in, relation of sulfur  
content and 2926  
in India 2054, 3270  
in Saudi Arabia 623
- Anopheles franciscanus**  
habitats of 2118  
in USA 2083, 2118  
on cattle, in California 2083  
on deer, in California 2083  
*Setaria yehi* in, in California 2083
- Anopheles freeborni**  
blood-meals in, ovarian regulation of  
retention of 848  
control of 3203  
*Dirofilaria immitis* in, in California 2083  
habitats of 2118  
in USA 2080, 2083, 2093, 2118, 2949,  
3203  
in rice-fields, in California 2093, 3203  
on dog, in California 2083  
*Plasmodium falciparum* in, infectivity of  
618  
*P. simium* in, infectivity of 576  
*P. vivax* in  
infectivity of 834  
transmission of 2896  
preyed on by, *Gambusia affinis*, in  
California 2093  
*Romanomermis culicivorax* in 2089  
surveillance for 2080  
Virgin River virus in, in Arizona 2949
- Anopheles funestus**  
chromosomes in 1545  
control of, insecticides for 409, 1794  
in Liberia 409, 1794  
*Plasmodium* spp. in, transmission of  
2127, 3195  
*Wuchereria bancrofti* in, pathogenicity of  
121
- Anopheles gambiae**  
*Coelomomyces* spp. in, in Nigeria 767  
control of 765, 766  
for malaria control 829  
genetic 3194  
insecticides for 409, 829, 1794  
cross-mating of, with  
*Anopheles arabiensis* 619  
*A. melas* 619  
DDT resistance in, preventing  
development of 824  
dieldrin resistance in, genetics of 824  
gynandromorph of 382  
habitats of 765  
adaptation to 766  
in Gambia 612  
in Liberia 409, 1794  
in Nigeria 765, 766, 767, 829  
in Saudi Arabia 623  
in Tanzania 1836  
in dwellings, in Nigeria 766, 829  
on man, in Tanzania 1836  
*Plasmodium* spp. in, transmission of  
2127, 3195  
*P. berghei* in, infectivity of, genetics of  
616  
*P. falciparum* in, infectivity of, through  
membranes 1549  
*P. yoelii* in  
loss of infectivity of 824  
not affected by insecticides 824  
pathogenicity of 824  
pressure as affecting 3200  
seasonal abundance of 1836  
swarming in 1823
- Anopheles gambiae** *contd.*  
taxonomy of  
characters distinguishing *A. arabiensis*  
and 64  
characters distinguishing *A. melas* and  
612  
temperature as affecting 3200  
*Wuchereria bancrofti* in, pathogenicity of  
121  
complex of  
chromosomes in 2899  
control of, lecithin monolayers for 854  
distribution maps for 2633  
in Ghana 97  
in rice-fields, in Kenya 854  
taxonomy of 1248  
traps for 97
- Anopheles gambiae** × *A. arabiensis* 619
- Anopheles grabhamii**  
Cache Valley virus in, in Jamaica 845  
in Jamaica 845
- Anopheles hilli**  
in Australia 106  
in coral cays, in Queensland 106
- Anopheles hyrcanus**  
breeding places of 2623  
DDT resistance in, in Tajikistan 1758  
habitats of 1758  
in India 2620, 2623  
in USSR 1024, 1758, 2594  
in Yugoslavia 3285  
Japanese encephalitis, virus in, in West  
Bengal 2620  
on man, in Ukraine 1024  
phenology of 2594  
group of  
in Indonesia 2067  
taxonomy of 2067
- Anopheles hyrcanus sinensis** (see *A. sinensis*)
- Anopheles jeyporiensis**  
in Thailand 2904  
taxonomy of 2904
- Anopheles jeyporiensis candidiensis**,  
taxonomy of, synonym of *A. jeyporiensis*  
2904
- Anopheles koliensis**  
breeding places of 1776  
in Indonesia 1776  
in Papua New Guinea 1771  
on man, in Papua New Guinea 1771  
*Plasmodium falciparum* in, in Irian Jaya  
1776  
seasonal abundance of 1771
- Anopheles labranchiae**  
chromosomes in 2356  
control of  
destroying breeding sites for 2128  
insecticides for 2128  
in Italy 770, 2128
- Anopheles labranchiae atroparvus** (see *A. atroparvus*)
- Anopheles lesteri**, in Japan 1217
- Anopheles letifer**  
biology of 598  
control of, insecticides for 598  
in Malaysia 598  
in dwellings, in Sarawak 598
- Anopheles leucosphyrus**, complex of,  
chromosomes in 2921
- Anopheles listeri**, in South Africa 84
- Anopheles maculatus**  
*Plasmodium simium* in, infectivity of  
576  
*P. vivax* in, transmission of 834, 2896
- Anopheles maculipennis**  
*Asco cystis culicis* in, in Ukraine 2590  
control of 850  
insecticides for 2596, 2911  
DDT in, effects on behaviour of 95  
DDT resistance in  
in Caucasus 2596  
in Iran 2911  
fungi in, in Ukraine 1757  
habitats of 599  
in France 3199  
in Iran 2911  
in Portugal 2233  
in Spain 2233  
in USSR 86, 850, 1024, 1757, 2346,  
2590, 2596, 3263  
in Yugoslavia 599, 3285  
larval diet of 3263
- Anopheles maculipennis** *contd.*  
malathion in, effects on behaviour of 95  
on livestock, in Ukraine 1024  
preyed on by, *Gambusia* spp. 2346  
West Nile virus in, transmission of 2233  
complex of  
chromosomes in 2356, 2899  
reproductive isolation in 1523
- Anopheles maculipennis atroparvus** (see *A. atroparvus*)
- Anopheles maculipennis maculipennis**, in  
USSR 1041, 1075
- Anopheles maculipennis messeae** (see *A. messeae*)
- Anopheles maculipennis sacharovi** (see *A. sacharovi*)
- Anopheles marshallii**, complex of, taxonomy  
of 1248
- Anopheles martinus**  
chromosomes in 2356  
in USSR 1523  
reproductive isolation of *A. sacharovi* and  
1523
- Anopheles mattogrossensis**  
in Colombia 3227  
parous rates in 3227
- Anopheles melanoon**, in Yugoslavia 3285
- Anopheles melanoon subalpinus**,  
chromosomes in 2356
- Anopheles melas**  
cross-mating of, with  
*Anopheles arabiensis* 619  
*A. gambiae* 619  
in Gambia 612, 1823  
swarming in 1823  
taxonomy of, characters distinguishing *A. gambiae* and 612
- Anopheles merus**  
in Tanzania 1836  
on man, in Tanzania 1836  
seasonal abundance of 1836
- Anopheles messeae**  
chromosomes in 2356  
control of  
growth regulators for 56  
insecticides for 404, 2596  
DDT resistance in, in Caucasus 2596  
habitats of 599  
in USSR 56, 86, 404, 405, 1041, 1075,  
2357, 2596  
in Yugoslavia 599, 3285  
in rice-fields, in Caucasus 56  
monogamy in 2357  
*Plasmodium* spp. in, infectivity of 405
- Anopheles minimus**  
control of, insecticides for 2054  
in India 2054  
in Japan 1217  
in Thailand 2904
- Anopheles moucheti**, *Plasmodium* spp. in,  
transmission of 3195
- Anopheles nigerrimus**  
control of, insecticides for 1775  
dieldrin resistance in, in Pakistan 1775  
fenthion resistance in, in Pakistan 1775  
in Pakistan 1775  
taxonomy of, misidentified as *A. vanus*  
108
- Anopheles nili**  
control of, insecticides for 1794  
in Ghana 97  
in Liberia 1794  
*Plasmodium* spp. in, transmission of  
3195  
traps for 97
- Anopheles nitidus**  
taxonomy of  
misidentified as *A. annularis* 108  
misidentified as *A. vanus* 108
- Anopheles nuneztovari**  
chromosome races of 2068  
chromosomes in 2899  
enzymes in 1768, 2068  
genetic variation in 1768  
habitats of 3194  
in Colombia 2068  
in Venezuela 2068  
*Plasmodium* spp. in, transmission of 326  
taxonomy of, relation of *A. darlingi* and  
1768
- Anopheles oswaldoi**  
in Colombia 3227  
parous rates in 3227



- Anopheles pampanai*, in Thailand 2904  
*Anopheles parensis*, chromosomes in 1545  
*Anopheles pedataeniatus*  
 taxonomy of  
 misidentified as *A. annularis* 108  
 misidentified as *A. vanus* 108  
*Anopheles pharoensis*, sterilisation of, X-irradiation for 578  
*Anopheles philippinensis*  
 control of, insecticides for 2054  
 in India 2054  
*Anopheles plumbeus*, in Yugoslavia 3285  
*Anopheles pseudopunctipennis*  
*pseudopunctipennis*  
 in El Salvador 843, 3237  
*Plasmodium falciparum* in, not infective 843  
*P. vivax* in, not infective 843  
 rearing of, techniques for 843, 3237  
*Anopheles pulcherrimus*  
 control of, insecticides for 1758, 1775, 2917  
 DDT resistance in  
 in Iraq 2917  
 in Tajikistan 1758  
 dieldrin resistance in, in Pakistan 1775  
 habitats of 1758  
 in Afghanistan 2127  
 in Iraq 2917  
 in Pakistan 1775  
 in USSR 1758  
*Anopheles punctipennis*  
*Diximermis peterseni* in, in Quebec 1197  
 in Canada 384, 1197, 1243  
 in USA 1531, 2083, 3211  
 in ponds  
 effects of aquatic plants on 1243  
 plant associations of 384  
 predators of, effects of aquatic plants on 1243  
*Strelkovimermis peterseni* in, in New York State 1531  
*Anopheles punctulatus*  
 breeding places of 1776  
 in Indonesia 1776  
 in Papua New Guinea 1771  
 on man, in Papua New Guinea 1771  
*Plasmodium falciparum* in, in Irian Jaya 1776  
 seasonal abundance of 1771  
*Anopheles quadrimaculatus*  
*Coelomomyces* spp. in 394  
*C. dodgei* in 611  
 control of  
 biological 2084  
 growth regulators for 1762  
 insecticides for 1193, 1763  
 repellents for 1813  
*Culicinomyces clavosporus* in 62  
*Dirofilaria immitis* in, in Michigan 378  
 in USA 378, 1193  
 in rice-fields, in Arkansas 1193  
 oviposition repellents for 1209  
*Plasmodium simium* in, infectivity of 576  
*P. vivax* in, infectivity of 834  
*Anopheles sacharovi*  
 biology of 853  
 chromosomes in 2356  
 control of 853  
 destroying breeding sites for 2128  
 insecticides for 76, 2917  
 DDT resistance in, in Iraq 2917  
 development in, effects of temperature on 851  
 in Iran 2127  
 in Iraq 2127, 2917  
 in Italy 770, 2128  
 in Syria 2127  
 in Turkey 76, 2127  
 in USSR 405, 850, 851, 853, 1523  
 in dwellings, in Azerbaijan 850  
 insecticide resistance in 2127  
 in Turkey 76  
 on man, in Azerbaijan 853  
*Plasmodium* spp. in, infectivity of 405  
 population age composition in 853  
 reproductive isolation of *A. martinius* and 1523  
 seasonal abundance of 851  
*Anopheles saperoi*  
 in Japan 1217  
*Anopheles saperoi* contd.  
 in forest streams, in Ryukyu Islands 1217  
*Anopheles sergentii*, in Saudi Arabia 623  
*Anopheles sinensis*  
 breeding places of 603, 3271  
*Brugia malayi* in, transmission of 2140  
 control of 2140  
 biological 1728  
 hosts of 2907  
 in China 2140, 2349  
 in Japan 603, 1217, 2907, 3271  
 in South Korea 2122  
 in rice-fields, in Hokkaido 603, 3271  
 on cattle, in Honshu 2907  
 on man, in Ryukyu Islands 1217  
 on pig, in Honshu 2907  
 seasonal abundance of 2122  
*Anopheles sinensis annularis* (see *A. annularis*)  
*Anopheles squamosus*, in South Africa 84  
*Anopheles stephensi*  
 adults of  
 glyceride accumulation in 3257  
 weight increases in 3257  
 antennae in, sensory receptors on 1200, 1201  
 chromosomes in 2894  
 ectopic pairing of 601  
 control of  
 biological 1797, 2606, 2622, 2884  
 insecticides for 617, 1775, 2640, 2912, 2915  
 DDT resistance in  
 and cross-resistance 3238  
 in India 2054  
 in Pakistan 1775  
 dieldrin resistance in, in Pakistan 1775  
 enzymes in 74  
 HCH resistance in, in India 2054  
 in Afghanistan 2127  
 in India 2054, 2373, 2640  
 in Iran 2127, 2912  
 in Iraq 2127, 2917  
 in Pakistan 617, 1775, 2915  
 in Saudi Arabia 623  
 in Syria 2127  
 in dwellings, in Iran 2912  
 in wells, in Tamil Nadu 2373  
 insecticide resistance in 2127  
 genetics of 2887  
 life tables for 395  
 malathion resistance in  
 in Iraq 2917  
 in Pakistan 1775, 2915  
 marking of, radiophosphorus for 3294  
 mid-gut in 1527  
*Nosema algerae* in, effects of 3259  
 permethrin resistance in 3238  
*Plasmodium berghei* in  
 effects of sulfadoxine on 90  
 effects on amino acids of 1199  
 increasing susceptibility to bacteria 3197  
 pathogenicity of 1198  
*P. cynomolgi* in, development of 680  
*P. vivax* in, infectivity of 834  
*P. yoelii* in  
 effects of 4-aminobenzoic acid on 90  
 not affected by insecticides 824  
 transmission of, effects on virulence of 610  
 pressure as affecting 3200  
 salivary glands in 74  
*Strelkovimermis peterseni* in, not infective 1531  
 temperature as affecting 3200  
*Anopheles subalpinus* (see *A. melanoon subalpinus*)  
*Anopheles subpictus*  
 breeding places of 1777  
 control of 2127  
 biological 2375  
 insecticides for 1775, 2640  
 DDT resistance in  
 in Pakistan 1775  
 in Pondicherry 2640  
 dieldrin resistance in  
 in Pakistan 1775  
 in Pondicherry 2640  
 feeding behaviour in 1777  
 fenthion resistance in, in Pakistan 1775  
 in India 2640  
*Anopheles subpictus* contd.  
 in Indonesia 1777  
 in Maldives 2127  
 in Pakistan 1775  
 on man, in Indonesia 1777  
 rearing of, techniques for 2621  
*Wuchereria bancrofti* in, infectivity of 1777  
*Anopheles sundaicus*  
 control of, growth regulators for 1554  
 in India 2058  
 in Indonesia 1554, 2127  
 in Philippines 2127  
 insecticide resistance in 2127  
 on *Macaca umbrosus*, in Andaman and Nicobar Islands 2058  
 on man, in Andaman and Nicobar Islands 2058  
*Plasmodium cynomolgi* in, transmission of 2058  
*Anopheles superpictus*  
 chromosomes in, polymorphism of 770  
 control of, insecticides for 1758  
 DDT resistance in, in Tajikistan 1758  
 habitats of 1758  
 in Italy 770  
 in Saudi Arabia 623  
 in USSR 1758  
 in Yugoslavia 3285  
 in animal housing, in Italy 770  
*Anopheles takasagoensis*  
 descriptions of 2070  
 in Taiwan 2070  
 on man, in Taiwan 2070  
 on monkey, in Taiwan 2070  
*Plasmodium inui* in, transmission of 2070  
 taxonomy of, distinct from *A. balabacensis* 2070  
*Anopheles tenebrosus*  
 taxonomy of  
 characters distinguishing *A. coustani* and 2946  
 characters distinguishing *A. ziemanni* and 2946  
*Anopheles tessellatus*  
 control of 2127  
 in China 2349  
 in Maldives 2127  
*Anopheles triannulatus*  
 in Colombia 3227  
 parous rates in 3227  
*Anopheles vanus*, taxonomy of 108  
*Anopheles varuna*, in Thailand 2904  
*Anopheles walkeri*  
*Diximermis peterseni* in, in Quebec 1197  
 in Canada 1197  
*Anopheles ziemanni*  
 flight speed in 2363  
 in Gambia 2363  
 taxonomy of  
 characters distinguishing *A. coustani* and 2946  
 characters distinguishing *A. tenebrosus* and 2946  
*Anophelinae*, insecticide resistance in 2286  
*Anoplocephala*, in, Histeridae, transmission of 686  
*Anoplocephalata*  
 in  
 Ceratozetoidea, in USSR 1081  
 Oribatei, in Azerbaijan 1051  
*Anoplura*  
 control of 2525  
 in Iraq 3142  
 in New Zealand 1494  
 in Nigeria 2003  
 in Saudi Arabia 2527  
 on cattle  
 in Nigeria 245  
 in Wyoming 2525  
 on rat, in Poland 50  
 on small mammals, in USSR 2571  
 on vertebrates, in Afrotropical region, book 1177  
 on zebu, in Malaysia 2538  
 pathogens of, bibliography 2517  
*Anorexia* (see Appetite disorders)  
*Anoura geoffroyi*, *Chirorhynchobia matsoni* on, in Mexico 2243  
*Anourosorex squamipes*  
*Hystriropsylla weida* in nests of, in Yunnan 569

- Anourosorex squamipes** contd.  
*Leptotrombidium yunnanensis* on, in Yunnan 1667
- Ant** (see Formicidae)
- Ant traps**, *Aedes aegypti* in, in West Malaysia 1800
- Antelope, lechwe** (see *Kobus lechwe*)
- antennata**, *Sergentomyia* (*Phlebotomus*) *antennatus*, *Phlebotomus* (see *Sergentomyia antennata*)
- antheratus**, *Latrodectus*
- Anthomyiidae**  
 in Azerbaijan 899  
 taxonomy of 905
- Anthrax**, in USSR 3413
- Anthrenidae**, book 322
- anthropophaga**, *Cordylobia*
- Antibiotics**, insecticidal activity of 1056
- Antibodies**  
 to *Centruroides noxius* venom, in rabbit 2781  
 to *Cimex*  
 in man 562  
 in rabbit 562  
 to *Culex*, in rabbit 562  
 to *Dermacentor variabilis*, in rabbit 3402  
 to *Dermatobia hominis*, in rabbit 1588, 3334  
 to *Haemaphysalis leporispalustris*, in *Sylvilagus floridanus* 492  
 to *Hypoderma bovis*, in cattle 1889  
 to *Hypoderma lineatum*, in cattle 1889  
 to Ixodoidea, in cattle 952  
 to *Ornithodoros moubata*, in rabbit 2220  
 to Simuliidae, in cattle 1290
- Antidorsas marsupialis**  
 arthropod parasites of, in South Africa 1888  
 pest control on 1888
- Antifeedants**, substances tested as:  
 furocoumarins 317, 2796
- Antigens**  
 of *Acarus siro* 1669  
 of *Aleuroglyphus ovatus* 3097  
 of *Carpoglyphus lactis* 3097  
 of *Dermacentor andersoni*, inducing host resistance 3067  
 of *Dermatobia hominis* 1588  
 of *Dermatophagoides farinae* 1418, 3097  
 of *Dermatophagoides pteronyssinus* 3097  
 of *Trypanosoma brucei*, changes within vector of 1335  
 of *Tyrollichus casei* 1669  
 of *Tyrophagus putrescentiae* 3097
- Antigua**, *Amblyomma variegatum* in 958
- Antihistaminics** (see Histamine H1 receptor blockers)
- antilopes**, *Melophagus*
- Antipodes Islands** (indexed under New Zealand Island Territories)
- antiqua**, *Delia* (*Hylemya*)
- antiqua**, *Hylemya* (see *Delia antiqua*)
- Antisera** (see Immune sera)
- Antivenins**, to scorpion venoms 1428
- Aotus trivirgatus**  
*Plasmodium simium* in, infectivity of 576  
*P. vivax* in  
 infectivity to *Anopheles* of 2896  
 infectivity to mosquitoes of 834
- Apallates**, gen. nov., description of 1832
- Apallates convexus**, taxonomy of, transferred from *Hippelates* 1832
- Apallates dissidens**, taxonomy of, transferred from *Hippelates* 1832
- Apallates hermsi**, taxonomy of, transferred from *Hippelates* 1832
- Apallates microcentrus**, taxonomy of, transferred from *Hippelates* 1832
- Apallates particeps**, taxonomy of, transferred from *Hippelates* 1832
- Apamin**  
 in *Apis mellifera* venom, allergenicity of 3381  
 in mouse, effects on central nervous system of 2458  
 in rat, effects on central nervous system of 2458
- Apeu virus**, in *Culex quinquefasciatus*, infectivity of 1524
- Aphanis dispar**, preying on, Culicidae 2642
- Aphidoidea**  
 chromosomes in 1995  
 in *Culicoides occidentalis* mating swarms, in California 2385
- Aphis fabae**, control of, insecticides for 2507
- Aphodiidae**  
 in Niger 3376  
 in Saudi Arabia 2529
- Aphodius**  
 in cattle dung  
 immigration and emigration of 1383  
 movement patterns of 3050  
 successions of 490  
 in dung  
 in German Federal Republic 3055  
 in UK 228  
 seasonal abundance of 228
- Aphodius fimetarius**, *Taenia saginata* in, transmission of 488
- Aphodius fossor**, *Taenia saginata* in, transmission of 488
- Aphodius haemorrhoidalis**  
*Ascarops strongylina* in, in Bulgaria 689  
 in Bulgaria 689  
*Simondsia paradoxa* in, in Bulgaria 689
- Aphodius obscurus**  
*Gongylonema pulchrum* in, in Bulgaria 689  
 in Bulgaria 689
- Aphodius satyrus**  
*Gongylonema pulchrum* in, in Bulgaria 689  
 in Bulgaria 689
- Aphodius sticticus**  
 in Bulgaria 689
- Physocephalus sexalatus** in, in Bulgaria 689
- Aphodius vittatus**  
 in USA 3210  
 in pastures, effects of insecticides on 3210
- apicalis**, *Culex*
- apicatus**, *Hippelates* (see *Liohippелates apicatus*)
- apicatus**, *Liohippелates* (*Hippelates*)
- Apidae**, venoms of, toxicity to mouse of 2205
- Apis mellifera**  
 enzymes in 748, 3381  
 insecticides in, acetylcholinesterase inhibition by 748  
 on man  
 hypersensitivity to 1930  
 diagnosis of 1389, 1933, 2455, 3383  
 treatment of 2459  
 pesticide poisoning of, cost of 751  
 SIR-8514 in, toxicity of 1014  
 venom of 231, 1929, 1930, 2455, 2458, 2459  
 allergenicity of components of 3381  
 virus diseases of 3
- apistus**, *Dinopsyllus*
- Aplodontopus sciuricola**  
 in USA 922  
 on *Tamias striatus*, in Rhode Island 922
- Apocrita**, taxonomy of, types in Cornell University collection 3387
- Apodemus**, *Uropoda orbicularis* on, in Poland 1655
- Apodemus agrarius**  
*Androlaelaps fahrenheitsi* on, feeding by 1954  
*Eulaelaps stabularis* in burrows of 1954  
*Gahrleipia meridionalis* on, in Yunnan 1667  
*Hystriochopsylla rotundisinuata* on, in Yunnan 2580  
 Ixodidae on, effects on oxygen consumption of 1066  
*Leptotrombidium allosemum* on, in China 2245  
 Trombiculidae on  
 in Bulgaria 1664  
 in Kiangsu 2760  
*Walchia* spp. on, in Kiangsu 1003  
*W. jiangxiensis* on, in China 3100
- Apodemus flavicollis**  
 Gamasoidea on, in Crimea 993  
*Ixodes trianguliceps* on, in Ukraine 2736  
*Palaeopsylla soricis* on, in Hungary 2027  
 Trombiculidae on, in Bulgaria 1664
- Apodemus latronum**  
*Genoneopsylla clavirostris* on, in China 2864  
*Neopsylla biseta* on, in Yunnan 570
- Apodemus peninsularis**, arthropod parasites of, in Maritime Territory 3389
- Apodemus speciosus**  
*Amphipsylla qinghaiensis* on, in China 567  
 Ixodidae on, effects on oxygen consumption of 1066  
*Megabothris sinensis* on, in China 567
- Apodemus speciosus latronum** (see *A. latronum*)
- Apodemus sylvaticus**  
*Amphipsylla kulkarnii* on, in Nepal 3186  
 arboviruses in, in Spain 2233  
 arthropods in nests of 1050  
*Callopsylla kazbegiensis* on, in Georgia (USSR) 816  
 Gamasoidea on  
 in Bulgaria 1659  
 in Crimea 993  
*Hystriochopsylla rotundisinuata* on, in Yunnan 2580  
*Ixodes persulcatus* on, no resistance to 1039  
*I. trianguliceps* on, in Ukraine 2736  
*Leptotrombidium yunnanensis* on, in Yunnan 1667  
*Neopsylla biseta* on, in Yunnan 570  
 Siphonaptera on  
 in USSR 1049  
 in Yunnan 568  
 Trombiculidae on, in Bulgaria 1664  
*Typhloceras poppei* on, in Morocco 3183
- Apomys**, *Walchiella impar* on, in Philippines 3428
- Aponomma**, in Indonesia 925
- Aponomma hydrosauri**  
 mating in 1951  
 inhibited before feeding 3401  
 on *Trachydosaurus rugosus*, development of 963  
 seasonal activity in 963
- Apparatus**  
 aspirated psychrometer for measuring microhabitat humidity 2274  
 automatic indoor insecticide duster 1601  
 delivery systems for electrophysiological studies on olfaction 542  
 for bioassay of larvicides against Simuliidae 2977  
 for exposing insects to low levels of air contaminants 314  
 for feeding Cimicidae on birds 1747  
 for feeding fleas in plague studies 1185  
 for gradually changing daylength in rearing chambers 1  
 for measuring electroantennogram responses to insect sex pheromones 1686  
 for sampling mosquito larvae 1811  
 for separating aquatic insects by size 2126  
 for serial mounting of small sections on slides 2514  
 for sorting swept insects 2275  
 insect genitalia vials 1017  
 standing-wave radar actograph for recording insect activity 2798
- appendiculatus**, *Rhipicephalus*
- appendigaster**, *Evania*
- Appetite disorders**  
 in Asian buffalo, caused by *Haematopinus tuberculatus* 2250  
 in pig, caused by *Vespa* 914
- apri**, *Haematopinus*
- aprojectus**, *Ctenophthalmus*
- apronophorus**, *Ixodes*
- Apyrase**  
 in *Rhodnius prolixus* saliva 354  
 properties of 1509
- aquasalis**, *Anopheles*
- Aquatic plants**  
 Culicidae and predators as affected by 1243  
 Simuliidae on, in Poland 2394
- Aquatic weeds**  
 control of, non-target effects of 3272  
*Gambusia* as affected by 2346
- aquatica**, *Limnochares*
- aquaticus**, *Asellus*



- arabiensis*, *Anopheles*  
 Arachidonic acid (see 5,8,11,14-Eicosatetraenoic acid, (all-Z)-)  
*Arachis hypogaea* (see Groundnut)  
 Arachnida, taxonomy of 1719  
*Araeopsylla faini*  
 sp. nov., description of 3181  
 in Rwanda 3181  
 on *Tadarida pumila*, in Rwanda 3181  
*araguayae*, *Bothriurus*  
 Araneae  
 common names of, in Australia 1454  
 in dwellings, in UK 331  
 overwintering of, in birds' nests 2005  
 preying on  
*Hydrotaea irritans*, in Irish Republic 2182  
*Ornithodoros amblus*, in Peru 275  
*Panstrongylus megistus*, in Brazil 42  
 Araneida (see Araneae)  
*aranti*, *Tabanus*  
*arboreus*, *Argas*  
*arboricola*, *Ixodes*  
 Arboviruses  
 in  
 cattle, surveillance for 866  
 Culicidae, transmission of 3284  
 man  
 in Central Africa, review 1826  
 in tropics, review 1945  
 in West Africa, review 1826  
 sea birds, review 1947  
 in Brazil 2897  
*Arctia caja*, toxin in 232  
*arcticum*, *Simulium*  
*Arcyophora*, on cattle, in Zimbabwe 1632  
 Ardap (see Cypermethrin)  
 Ardeidae, Japanese encephalitis, virus in, in India 573  
*arenaria*, *Dolichovespula* (*Vespula*)  
*arenaria*, *Vespula* (see *Dolichovespula arenaria*)  
*arenicola*, *Leptotrombidium*  
 Aretit (see Dinoseb)  
 Argas  
 Congo virus in, transmission of 1945  
 identifying of 2807  
 in Italy 3064  
*Argas arboreus*  
 chromosomes in 2469  
 fertility in, effects of  $\gamma$ -irradiation on 1397  
 nymphs of, effects of  $\gamma$ -irradiation on 1397  
 parthenogenesis in 2755  
 phospholipids in, developmental changes in 2757  
 salivary glands in 2477  
 serial mounting of sections of 2514  
 taxonomy of 968  
*Argas arboreus*  $\times$  *A. robertsi* 968  
*Argas brumpti*  
 in Zimbabwe 1942  
 on man, effects of bites by 1942  
*Argas hermanni*  
 in Afghanistan 695  
 Quaranfil virus in, in Afghanistan 695  
 Royal Farm virus in, in Afghanistan 695  
 Uukuniemi virus in, in Afghanistan 695  
*Argas persicus*  
*Bacillus thuringiensis* in, pathogenicity of, strain differences in 1048  
 bacteria in, in Pakistan 247  
 biology of 1941, 3087  
 control of  
 acaricides for 1718  
 biological 1048  
 hosts of 1941  
 in Czechoslovakia 3087  
 in Egypt 718  
 in Nigeria 1493  
 in Pakistan 247  
 in USSR 1029, 1718, 1941  
 in Yugoslavia 701  
 in fowl housing, in Armenia 1718  
 insect juvenile hormones in, accentuating effects of precocenes 1393  
 life-cycle of 718  
*Mycoplasma gallisepticum* in  
 in Kabardino-Balkaria 1029  
 persistence of 1029  
 on fowl, in Nigeria 1493  
 on guinea-fowl, in Nigeria 1493  
*Argas persicus* contd.  
 precocenes in, effects of 1393  
*Argas reflexus*  
 biology of 1941  
 hosts of 1941  
 in USSR 1941  
 in Yugoslavia 701  
*Argas robertsi*  
 identifying of 2807  
 in Indonesia 2807  
 in Thailand 2815  
 life history of 2815  
 on *Anastomus oscitans*, in Thailand 2815  
 taxonomy of 968  
*Argas robertsi*  $\times$  *A. arboreus* 968  
*Argas tridentatus*, olfactory sensilla in 3409  
*Argas vespertilionis*  
 biology of 1941  
 hosts of 1941  
 in USSR 1071, 1941  
 on bat, in Uzbekistan 1071  
*Argas vulgaris*  
 biology of 1941  
 hosts of 1941  
 in Iran 2211, 2758  
 in USSR 1941  
 Quaranfil virus in, in Iran 2211, 2758  
*Argas walkerae*, *Aegyptianella pullorum* in, multiplication of 498  
 Argasidae  
 in Afghanistan 695  
 in Malagasy Republic 3060  
 in Spain 243  
 phagostimulants for 1471  
 salivary glands in, functions of, review 953  
*argentata*, *Brachydeutera*  
*argenteomaculatus*, *Tabanus*  
*argenteostriatum*, *Simulium*  
 Argentina  
*Aedeomyia squamipennis* in, viruses in 2629  
*Chrysops* spp. in 1476  
 Culicidae in 400  
 Encyrtidae in 555  
*Hoplopleura* spp. in, on rodents 1475  
*Latrodectus* spp. in 1473  
 mites in  
 in dwellings 984  
 on Rodentia 321  
 Scorpiones in 1477  
 Siphonaptera in, on Rodentia 321, 357  
 Tabanidae in 463  
*argentipes*, *Phlebotomus*  
*argentscutum*, *Simulium*  
*Arginase*, in *Aldrichina grahami* larvae, localisation of 186  
 L-Arginine  
 in *Aedes togoi*, utilisation by *Brugia patei* of 68  
 in *Aldrichina grahami*, entry into fat-body mitochondria of 2190  
 in *Anopheles atroparvus*, utilisation by *Brugia patei* of 68  
 in *Psoroptes cuniculi* 2486  
 in *Psoroptes ovis* 2486  
*argus*, *Simulium*  
*argyreatum*, *Simulium*  
*argyrostoma*, *Parasarcophaga* (see *Sarcophaga argyrostoma*)  
*argyrostoma*, *Sarcophaga* (*Parasarcophaga*)  
*ariasi*, *Phlebotomus*  
 Aride virus, in, sea birds, effects of 1947  
*Aristolochia bracteata*, chemosterilant activity of extracts of 1755  
*Aristolochic acid I* (see Phenanthro[3,4-d]-1,3-dioxole-5-carboxylic acid, 8-methoxy-6-nitro-)  
 Arizona  
*Anopheles freeborni* in, viruses in 2949  
*Eutrombicula batatas* in 982  
*Geomydoecus* spp. in, on *Thomomys* 1171  
 Arkansas  
*Agelaius phoeniceus* in, arthropod parasites of 4  
*Anopheles quadrimaculatus* in, in rice-fields 1193  
*Psorophora columbiae* in, in rice-fields 376, 1193  
*armatus*, *Ctenophyllus*  
*armatus*, *Ischyropoda*  
*armenica*, *Formica cinerea*  
*Armigeres*, in Philippines 856  
*Armigeres breinli*  
 in Papua New Guinea 833  
 on man, in Bismarck Archipelago 833  
*Armigeres durhami*  
*Breinlia booliati* in, not affecting refractoriness to *Brugia malayi* 1774  
*Brugia malayi* in, not infective 1774  
*Armigeres subalbatus*  
*Ascocystis armigeri* in, in Taiwan 1215  
*Breinlia booliati* in, not affecting refractoriness to *Brugia malayi* 1774  
*Brugia malayi* in, not infective 1774  
*Coelomomyces stegomyiae* in, in Taiwan 2031  
 control of, insecticides for 2640  
 in India 2640  
 in Japan 1217  
 in Taiwan 1215, 2031  
 on man, in Ryukyu Islands 1217  
*arpaklensis*, *Sergentomyia* (see *S. dentata*)  
 Arrenuridae, parasitising, Culicidae, in Quebec 2354  
*Arrenurus albator*  
 in West Germany 468  
 parasitising, Nematocera, in West Germany 468  
*Arrenurus buccinator*  
 in West Germany 468  
 parasitising, Nematocera, in West Germany 468  
*Arrenurus crassicaudatus*  
 in West Germany 468  
 parasitising, Nematocera, in West Germany 468  
*Arrenurus globator*  
 in West Germany 468  
 parasitising, Nematocera, in West Germany 468  
*Arrenurus latus*  
 in West Germany 468  
 parasitising, Nematocera, in West Germany 468  
*Arrenurus pseudotenuicollis*  
 host mortality caused by 2046  
 in USA 2046  
 parasitising, *Anopheles crucians*, in Florida 2046  
*Arrenurus securiformis*  
 in West Germany 468  
 parasitising, Nematocera, in West Germany 468  
*Arrenurus sinuator*  
 in West Germany 468  
 parasitising, Nematocera, in West Germany 468  
*Arrenurus truncatellus*  
 in West Germany 468  
 parasitising, Nematocera, in West Germany 468  
 Arrhythmia  
 in man  
 caused by scorpion stings 2256  
 caused by *Vespula* 915  
 Arsenic oxide ( $As_2O_3$ ), in *Buphagus erythrorhynchus*, toxicity of 1643  
 Arsenicals, resistance to, in, *Boophilus microplus*, in South Africa 939  
 Arthritis, infectious  
*Ixodes dammini* and 269  
 tick transmission of 3137  
 Arthromitus, in, Culicidae, in Nebraska 2043  
 Arthropods  
 biological clocks in, book 1723  
 common names of  
 in Australia 1454  
 in German Federal Republic 545  
 compound eyes in, review 778  
 cultures of, catalogue 1999  
 cuticle in, techniques, book 3131  
 index-catalogue 3148  
 medically-important, in Mauritius 3141  
 on man  
 book 1153  
 hypersensitivity to 2828  
 problems of observing living 780  
 receptors in, functional morphology of 1158  
*arthurneivai*, *Triatoma*  
*artibei*, *Ophthalmodex*

- Artibeus lituratus**, *Ophthalmomox* *artibeii* on, in Suriname 735
- aruni**, *Anopheles*
- arvalis**, *Hyperlaelaps*
- Arylesterase** (see Esterase, aryl)
- Asca bicornis**  
in Bulgaria 1659  
on small mammals, in Bulgaria 1659
- Ascaris suum**, in, pig, in German Federal Republic 1959
- Ascarops strongylina**, in, *Aphodius haemorrhoidalis*, in Bulgaria 689
- Ascocystis armigerei**  
sp. nov., description of 1215  
in  
    *Aedes alcasidi*, development of 1215  
    *Armigeres subulatus*, in Taiwan 1215
- Ascocystis culicis**  
descriptions of 1215  
in  
    *Aedes aegypti*, in Taiwan 1215  
    *A. desmotes*, development of 1215  
    *A. excrucians*, in Ukraine 2590  
    *A. geniculatus*, in Ukraine 2590  
    *Anopheles maculipennis*, in Ukraine 2590  
    *Culex pipiens*, in Ukraine 2590
- Ascocystis lanyuensis**  
sp. nov., description of 1215  
in  
    *Aedes alcasidi*  
        development of 1215  
        in Taiwan 1215
- Ascocystis taiwanensis**  
sp. nov., description of 1215  
in, *Aedes albopictus*, in Taiwan 1215
- Ascoschoengastia indica**  
in Burma 2479  
on *Bandicota bengalensis*, in Burma 2479  
on *Rattus exulans*, in Burma 2479  
on *Rattus norvegicus*, in Burma 2479  
on *Rattus rattus*, in Burma 2479
- Ascoschoengastia montana**  
sp. nov., description of 293  
in China 293  
on *Petaurista yunnanensis*, in Yunnan 293
- Ascoschoengastia rousetti**  
sp. nov., description of 3428  
in Philippines 3428  
on *Rousettus amplexicaudatus*, in Philippines 3428
- Ascoschoengastia yunnanensis**  
sp. nov., description of 293  
in China 293  
on *Petaurista yunnanensis*, in Yunnan 293  
on *Rattus flavipectus*, in Yunnan 293
- Asellus aquaticus**  
in Czechoslovakia 2942  
in aquatic habitats, effects of pirimiphos-methyl on 2942  
permethrin in, toxicity of 2713
- Asia, South-East**  
Ceratopogonidae in 2822  
dengue hemorrhagic fever in 390
- Asiatic-Pacific region**, *Schoengastia* spp. in 513
- asiatica**, *Polyplax*
- asiatica**, *Ratemia*
- asiaticum**, *Hyalomma*
- Asio flammeus**, *Haemaphysalis kutchensis* on, in Tajikistan 3080
- asio**, *Megabothris*
- Asiolabidocarpus**, taxonomy of 2484
- L-Asparagine**  
in *Cochliomyia macellaria*, unchanged during anaerobic metabolism 1359  
in *Culiseta incidens* diet, requirement for 1238  
in *Psoroptes cuniculi* 2486  
in *Psoroptes ovis* 2486
- L-Aspartic acid**  
in *Anopheles stephensi*, effects of *Plasmodium berghei* on 1199  
in *Cochliomyia macellaria*, decreasing during anaerobic metabolism 1359
- asper**, *Bothriurus*
- Aspergillus**  
in  
    Culicidae  
        in Ukraine 1025, 1757
- Aspergillus contd.**  
in contd.  
    Culicidae contd.  
        in USSR 1019
- Aspergillus fumigatus**, in, man, hypersensitivity to 992
- Aspergillus niger**, in, Culicidae, in USSR 1019
- Aspergillus terreus**, in, *Phlebotomus* spp., pathogenicity of 2968
- assamensis**, *Haematopota*
- assamensis**, *Onitis*
- assimilis**, *Ctenophthalmus*
- Astacus leptodactylus**, antennae in, proteins in 3153
- Astaxanthin** (see  $\beta, \beta$ -Carotene-4,4'-dione, 3,3'-dihydroxy-, (3S,3'S)-)
- Aster divaricatus**, *Psorophora ferox* on, in Connecticut 1208
- Aster lowrieanus**, *Psorophora ferox* on, in Connecticut 1208
- Asthma**  
in man  
    caused by *Dermatophagoides pteronyssinus* 2763  
    caused by house-dust mites 1426  
    caused by *Sarcophaga carnaria* 769  
    diagnosis of 3420  
    role of house-dust mites in 520, 1958, 1975
- astictopus**, *Chaoborus*
- Astigmata**, on small mammals, in South Dakota 511
- astur**, *Hybomitra*
- Asuntol** (see Coumaphos)
- asymmetricus**, *Geomydoecus*
- ater**, *Chrysops* (see *C. carbonarius*)
- Atheta**, in dung, in USSR 1057
- atlantica**, *Culiseta*
- Atopomelidae**  
in Neotropical region 286  
phylogeny of 1952
- Atopophthirus setosus**  
sp. nov., description of 558  
in China 558  
on *Petaurista petaurista*, in China 558
- ATP** (see Adenosine 5'-(tetrahydrogen triphosphate))
- ATPase** (see Phosphatase, adenosine tri-)
- atratus**, *Tabanus*
- Atrichopogon**, mouthparts in 3300
- atricarpus**, *Whitneyomyia beatifica* (see *W. beatifica*)
- atripennis**, *Tabanus nigrescens*
- Atroban** (see Permethrin)
- atropalpus**, *Aedes*
- atroparvus**, *Anopheles*
- Atropine**  
in guinea-pig, modification of effects of scorpion venom on heart by 309  
in rat, effects on malathion toxicity of 750
- Atta**, control of, insecticides for 758
- Attagenus megatoma** (see *A. unicolor*)
- Attagenus unicolor**  
in USA 2582  
in bat dung, in Massachusetts 2582
- attenuatus**, *Chironomus*
- Attractants**  
bioassay of, review 1455  
for Culicidae 3284  
insect control using 1983  
measuring electroantennogram responses to 1686  
substances tested as: cyclic analogues of lactic acid 1525
- Atylotus**  
in Norway 1907  
in Soviet Far East 3348  
in USSR 2692
- Atylotus chodukini**  
in USSR 205  
on cattle, in Tadzhikistan 205  
on man, in Tadzhikistan 205
- Atylotus ohioensis**, in USA 661
- Atylotus pulchellus**  
in USSR 205  
on cattle, in Tadzhikistan 205  
on man, in Tadzhikistan 205
- Atyphloceras multidentatus**  
in USA 2586  
on *Microtus canicaudus*, in Oregon 2586
- Auckland Islands** (indexed under New Zealand Island Territories)
- augur**, *Calliphora*
- aurata**, *Macronychia*
- aurati**, *Demodex*
- aureum**, *Eusimulium* (see *Simulium aureum*)
- aureum**, *Simulium* (*Eusimulium*)
- auricoma**, *Obuchovia* (see *Simulium auricoma*)
- auricoma**, *Simulium* (*Obuchovia*)
- auricularia**, *Forficula*
- aupila**, *Hybomitra*
- auris**, *Raillietia*
- aurotaeniatus**, *Aedes*
- austeni**, *Culicoides*
- austeni**, *Simulium* (see *S. posticatum*)
- australasiae**, *Calcaromyobia*
- australasiae**, *Periplaneta*
- Australia** (see also individual States and Territories)  
arthropods in, common names of 1454  
*Boophilus microplus* in, on zebu 938  
Calliphoridae in, on sheep 164  
Culicoidini in 863  
*Demodex zaphi* in, on zoo *Zalophus californianus* 2228  
entomology in, bibliography 2518, 2519, 2520, 2521, 2522, 2523  
insects in, book 3151  
livestock in, arboviruses in 2652  
medical entomology in 18, 19, 2831  
*Spilopsyllus cuniculi* in, on rabbit 2323  
veterinary entomology in 18, 19, 779, 2831, 2832
- Australian Capital Territory**, *Onthophagus granulatus* in, in cattle dung 2728
- australicus**, *Culex*
- australis**, *Aedes*
- australis**, *Androctonus*
- australis**, *Raillietia*
- Australophyra rostrata**  
descriptions of 893  
in Australia 165  
on sheep, in Western Australia 165
- Austria**  
*Alphitobius diaperinus* in, in fowl houses 687  
*Cheyletiella blakei* in, on cat 515  
*Haematopota csikii* in 17  
Simuliidae in 3316
- Austroglycyphagus**, key 1000
- Austroglycyphagus kualalumpurensis**  
sp. nov., description of 1000  
in Malaysia 1000  
in house dust, in West Malaysia 1000
- Austroglycyphagus malaysiensis**  
sp. nov., description of 1000  
in Malaysia 1000  
in house dust, in West Malaysia 1000
- Austrosimulium unguatum**, *Leucocytozoon tawaki* in, ultrastructure of 142
- Autan** (see Deet)
- autogenicus**, *Culex pipiens* (see *C. molestus*)
- autumnalis**, *Musca*
- autumnalis**, *Neotrombicula* (*Trombicula*)
- autumnalis**, *Tabanus*
- autumnalis**, *Trombicula* (see *Neotrombicula autumnalis*)
- avenae**, *Sitobion*
- Avermectin B<sub>1</sub>**, 22,23-dihydro-, against, *Psoroptes cuniculi*, on rabbit 2248
- Avermectins**  
acaricidal activity of 2248  
against, *Haematopinus suis*, on pig 346  
insecticidal activity of 2433
- avicularia**, *Ornithomya*
- Aviostivalius**, gen. nov., description of 2306
- Aviostivalius klossi**, taxonomy of, transferred from *Stivalius* 2306
- Azadirachta indica**, insecticidal activity of extracts of 1561, 3216
- Azadirachta indica** extracts, with pyrethrins, against, *Musca domestica* 1447
- Azelia cilipes**, in China 1618
- 1H-Azepine**, 1-benzoylhexahydro-, repellent for, *Hypoderma* spp., on cattle 2689
- Azidin** (see Diminazene aceturate)
- Azinphos-ethyl** (*O*,*O*-diethyl *S*-[(4-oxo-1,2,3-benzotriazin-3(4*H*)-yl)methyl] phosphorodithioate)  
resistance to, in, *Culex pipiens* 2604
- Azinphosethyl** (see Azinphos-ethyl)



- Aziridine, 1,1',1''-phosphinothioylidynetris-** (see Thiotepa)
- Aziridine, 1,1',1''-phosphinylidynetris-** (see Tepa)
- Aziridine, 1,1',1''-phosphinylidynetris[2-methyl-** (see Metepa)
- 1-Aziridinecarboxamide, N,N'-1,6-hexanediyldis-**  
in *Lucilia cuprina*  
effects on life-span of 1609  
effects on mating of 1609
- 1-Aziridinecarboxylic acid, 3-(2,2-dichloroethenyl)-2,2-dimethyl-**  
(3-phenoxyphenyl)methyl ester,  
insecticidal activity of 2264  
[5-(phenylmethyl)-3-furanyl]methyl ester,  
insecticidal activity of 2264
- 1-Aziridinecarboxylic acid, 2,2-dimethyl-3-(2-methyl-1-propenyl)-**  
2-methyl-4-oxo-3-(2-propenyl)-2-cyclopenten-1-yl ester, insecticidal activity of 2264  
(3-phenoxyphenyl)methyl ester,  
insecticidal activity of 2264  
[5-(phenylmethyl)-3-furanyl]methyl ester,  
insecticidal activity of 2264
- Azodrin** (see Monocrotophos)
- Azores**  
*Culex molestus* in 1240  
*Culiseta atlantica* in 2069  
*C. longiareolata* in 1239
- azteca, Hyalella**
- Babesia**  
book 2259  
control of, vector control for 253, 943  
development in, effects of temperature on 1938  
epidemiology of 3393  
in  
*Boophilus decoloratus*, detecting of 1109  
*B. geigyi*, detecting of 1109  
*B. microplus*, transmission of 1938, 2476, 2832  
cattle  
effects on immunity to ticks of 1938  
in Costa Rica 3393  
deer, in German Democratic Republic 1721  
goat, in Egypt 2756  
horse  
in South Africa 941  
in Zimbabwe 941  
Ixodoidea, transmission of 953  
man 3396  
review 940  
*Rhipicephalus sanguineus*, transmission of 965  
sheep, in Egypt 2756  
taxonomy of 3396
- Babesia argentina** (see *B. bovis*)
- Babesia bigemina**  
control of 947, 948, 2224  
antiprotozoals for 1069  
vector control for 236  
in  
*Boophilus* spp., transmission of 948  
*B. calcaratus*, infectivity of, effects of diminazene aceturate on 1069  
*B. microplus*  
development of 1394  
enzymes in 264  
transmission of 947, 3060  
ultrastructure of 264  
cattle  
immunity to, specificity of 2221  
in Australia 947  
in Colombia 236  
in French Polynesia 1943  
in Nigeria 245  
in South Africa 948, 2224  
in Zimbabwe 937  
*Rhipicephalus sanguineus*, transmission of 1943  
zebu, in Malaysia 2538
- Babesia bovis**  
control of 947, 948, 2224  
vector control for 236  
in  
*Boophilus* spp., transmission of 948  
*B. microplus*  
pathogenicity of, effects of blood passing on 3088
- Babesia bovis contd.**  
in contd.  
*Boophilus microplus* contd.  
transmission of 947, 3060  
cattle  
immunity to, specificity of 2221  
in Australia 947  
in Colombia 236  
in Mexico 1640  
in South Africa 948, 2224  
zebu, in Malaysia 2538
- Babesia canis**, in, *Dermacentor reticulatus*, development of 272
- Babesia colchica**  
control of, antiprotozoals for 1069  
in, *Boophilus calcaratus*, infectivity of, effects of diminazene aceturate on 1069
- Babesia divergens**  
control of, immunization for 946  
in  
cattle  
in Irish Republic 1635  
in Northern Ireland 946, 2212  
*Ixodes ricinus*  
in UK 3398  
transmission of 277, 946, 1635, 2212  
*Meriones unguiculatus*, infectivity of 277
- Babesia equi**, in, *Boophilus microplus*, transmission of 3060
- Babesia major**, in, *Haemaphysalis punctata*, in UK 3398
- Babesia microti**  
in  
*Dermacentor andersoni*, not transmitted 242  
*D. variabilis*, not transmitted 242  
*Ixodes dammini*  
in Massachusetts 1651  
transmission of 3397  
*I. pacificus*, transmission of 242  
*I. scapularis*, transmission of 242  
*I. trianguliceps*, transmission of 971  
man, in North America 3397  
small mammals, in England 971  
reservoirs of 3397
- Babesia motasi**  
in  
*Haemaphysalis punctata*  
in Wales 2472  
transmission of 1410, 1948  
sheep  
in Netherlands 1410  
in Wales 1948
- Babesia ovis**  
in  
*Boophilus microplus*, transmission of 3060  
*Rhipicephalus bursa*, enzymes in 264, 3077
- Babesiosis**, in Philippines 2804
- babu, Sergentomyia**
- Bacillariophyta**, eaten by *Simulium* larvae 1037
- Bacillus alvei**  
against, *Culex quinquefasciatus* 2641  
culture methods for 2641  
storage of 2641
- Bacillus anthracis**  
in  
*Argas persicus*, in Pakistan 247  
poultry, pathogenicity of 247
- Bacillus brevis**  
against, *Culex quinquefasciatus* 2641  
culture methods for 2641  
storage of 2641
- Bacillus cereus**, in, Culicidae, in USSR 1038
- Bacillus dendrolimus** (see *B. thuringiensis* var. *dendrolimus*)
- Bacillus insectus** (see *B. thuringiensis* var. *thuringiensis*)
- Bacillus sphaericus**  
against  
*Aedes aegypti* 2622  
*Anopheles albimanus* 1572  
*A. stephensi* 2606, 2622  
*A. subpictus* 2375  
*Culex pipiens* 1216  
*C. quinquefasciatus* 1572, 1812, 2375, 2622
- Bacillus sphaericus contd.**  
against contd.  
Culicidae 1207, 1522, 1537, 1707, 2955, 3266  
in catch basins 2088  
formulations of 1572  
shelf-life of 586  
in  
*Aedes aegypti*, pathogenicity of, effects of larval behaviour on 3260  
*Anopheles* spp., in Pondicherry 2622  
*A. albimanus*, pathogenicity of, effects of larval behaviour on 3260  
*Culex* spp., in Pondicherry 2622  
*C. quinquefasciatus*  
ingestion of, measuring of 2892  
pathogenicity of, effects of larval behaviour on 3260  
Culicidae, in Romania 1537  
mouse, not pathogenic 1785  
rabbit, not pathogenic 1785  
rat, not pathogenic 1785  
insecticidal activity of, effects of temperature on 2375  
local production of 1553  
mode of action of 1537  
non-target effects of 1537  
sewage as affecting 2088  
strains of, characterisation of 2350  
sunlight as affecting 2088  
WHO data sheet on 830
- Bacillus subtilis**  
in  
*Argas persicus*, in Pakistan 247  
poultry, pathogenicity of 247
- Bacillus thuringiensis**  
against  
*Anopheles* spp. 3200  
Culicidae 2955, 3266  
in rice-fields 1827  
book 2787  
in, Culicidae, in Romania 1537  
insect control using, review 1535  
parasporal protein crystals in, structural chemistry of 1536  
pest control using 1048  
production of, review 1535
- Bacillus thuringiensis** var. *aizawai*, plasmids in 1570
- Bacillus thuringiensis** var. *caucasicus*  
against, *Xenopsylla cheopis* 1186  
malathion in, toxicity of 312
- Bacillus thuringiensis** var. *darmstadensis*  
against  
*Aedes aegypti* 1228  
*Culex molestus* 1228  
*C. tritaeniorhynchus* 1228
- Bacillus thuringiensis** var. *dendrolimus*  
dimethoate in, not toxic 312  
malathion in, toxicity of 312  
trichlorphon in, not toxic 312
- Bacillus thuringiensis** var. *finitimus*, plasmids not detectable in 1570
- Bacillus thuringiensis** var. *galleriae*  
against  
*Aedes aegypti* 3250  
Culicidae 1038  
in, *Argas persicus*, pathogenicity of, strain differences in 1048
- Bacillus thuringiensis** var. *israelensis*  
against  
*Aedes* spp., in irrigated pastures 2088  
*A. aegypti* 118, 1711, 2042, 3250  
*A. cantans* 1249, 1250  
*A. caspius* 1711, 3298  
*A. detritus* 1711, 3298  
in tree holes 3297  
*A. dorsalis*, in salt marshes 2087  
*A. rusticus* 1250  
*A. taeniorhynchus* 2042  
*Anopheles albimanus* 118, 1572  
*A. atroparvus* 1711  
*A. stephensi* 1797, 2884  
*Coquillettidia richiardii* 3298  
*Culex pipiens* 1249, 1711, 1797, 3298  
in drains 3297  
*C. quinquefasciatus* 118, 1572  
*C. tarsalis*  
in irrigated pastures 2088  
in salt marshes 2087  
Culicidae 1535, 1537, 1707, 1798, 2084, 2085, 2954, 3296  
in catch basins 2088

**Bacillus thuringiensis var. israelensis** contd.  
against contd.

- Culicidae contd.
  - in salt marshes 2381
  - Culicoides occidentalis* 2385
  - Culiseta morsitans* 1250
  - Psorophora columbiae*, in rice-fields 376
  - Simuliidae 1535, 1854
  - in streams 3313
  - Simulium verecundum* 2085
  - S. vittatum* 2397, 2976, 2977
  - vectors 2286
  - bioassay of, apparatus for 2977
  - commercial development of 2085
  - crystals of, serological relationships of 597
  - formulations of
  - persistence of 2884
  - stability under tropical conditions of 310
  - standardisation of 93, 580, 581
  - sterilisation of, UV-irradiation for 1249, 1250
  - variations in concentration 2400
- in
- Aedes aegypti*, effects of age on susceptibility to 2042
  - A. taeniorhynchus*, effects of age on susceptibility to 2042
  - Anopheles albimanus*, pathogenicity of, not affected by insecticide resistance 2924
  - Chironomus plumosus*, not pathogenic 1797
  - Culex quinquefasciatus*, pathogenicity of, not affected by insecticide resistance 2924
  - Culicidae, effects of 2633
  - Daphnia magna*, not pathogenic 1797
  - fresh water, non-target effects of 3296
  - Limnephilus flavicornis*, not pathogenic 1797
  - Manduca sexta*, not pathogenic 118
  - mosquito breeding sites, non-target effects of 2925
  - natural waters, contamination by 1249
  - streams, non-target effects of 1854
  - Tilapia nilotica*, not pathogenic 1797
  - local production of 1553
  - non-target effects of 2086
  - parasporal protein crystals in 1536
  - pH as affecting 2084
  - plasmids in 1570
  - sewage as affecting 2088
  - sunlight as affecting 2088
  - temperature as affecting 2084

**Bacillus thuringiensis var. kurstaki**  
against

- Aedes aegypti* 3250
  - Manduca sexta* 118
- in
- Aedes aegypti*, not pathogenic 118
  - Anopheles albimanus*, not pathogenic 118
  - Culex quinquefasciatus*, not pathogenic 118
  - plasmids in 1570
  - taxonomy of, var. *thuringiensis* showing crystal activity of 2501

**Bacillus thuringiensis var. thuringiensis**  
against

- Aedes aegypti* 3250
- A. triseriatus* 2501
- Culex tarsalis* 2501
- exotoxin of, effects of fermentation media on 197
- malathion in, not toxic 312
- plasmids in 1570
- taxonomy of, *kurstaki* crystal activity in 2501

**Bacillus thuringiensis var. tolworthi**,  
exotoxin of, effects of fermentation media on 197**bacoti, Liponyssus** (see *Ornithonyssus bacoti*)**bacoti, Ornithonyssus** (*Liponyssus*)**Bacteria**

- in
- Blatta orientalis*, in UK 3157
- Chironomus plumosus*, in Ontario 1902
- Culicidae, review 1783

**Bacteria** contd.

- in contd.
- Diptera, in Brazil 479
- insects, defence mechanisms against 544
- invertebrates, role in population dynamics of 2839
- medically-important arthropods, bibliography 2517
- Nauphoeta cinerea*
- effects of absence of symbiotic 2545
- transovarial transmission of 2544
- Periplaneta americana*
- in gut 29
- in Philippines 1727
- Simuliidae, in Ukraine 1055
- Solenopsis invicta*, in Brazil 1627
- Tabanidae, in USSR 3040
- insect control using 3118
- non-target effects of 2258
- review 1680
- mosquito control using 3194
- Simuliidae feeding on, in Finland 1577

**Baculoviridae**

- in
  - Aedes epactius*, pathogenicity of, age-related changes in 63
  - A. sollicitans*, replication of 2882
  - forest pests, role in population dynamics of 2839
  - invertebrates, review 525
  - mammal cell lines, no effects from 1034
  - Zeiraphera diniana*, role in population dynamics of 2839
- Badger, Haemaphysalis japonica** on, in Maritime Territory 2734
- badius, Pogonomyrmex badiusalis, Paraponyx baetis**
- in ponds, effects of insect growth regulators on 3024
  - in rivers, as indicators of effects of insecticides 1292

**baghdadis, Sergentomyia**

- baibacina, Frontopsylla frontalis bailyi, Sergentomyia bairamaliensis, Coptopsylla Bakerdania bavarica*, in USSR 1053
- Bakerdania cultrata*, in USSR 1053
- Bakeries, pest control in 1156
- balabacensis, Anopheles bamboo cups, Culicidae* in, in Philippines 856

**Bamboo groves, Trombiculidae** in, in Kiangsu 2760**bambusa, Tripteroides****Banana, Aedes simpsoni** in axils of, in Nigeria 591**Bandicota bengalensis**

- Hoplopleuridae on, in Burma 1496
- Listrophoroides exilis* on, in Pakistan 2772
- Mesostigmata on, in Burma 2478
- Trombiculidae on, in Burma 2479

**Bangladesh**

- Culex gelidus* in 1562
- C. tritaeniorhynchus* in 1562
- Japanese encephalitis in 1562, 2371
- Barathra brassicae* (see *Mamestra brassicae*)
- Barbastella darjeelingensis*, Acari on, in Uzbekistan 1071

**Barbatolysin**

- in mouse, not lethal 231
- in *Pogonomyrmex barbatus* venom, hemolytic activity of 231

**barbatus, Pogonomyrmex**

- barberi, Triatoma barbirostris, Anopheles barbosai, Culicoides barraudi, Sergentomyia Barrels, Aedes japonicus* in, in Hokkaido 3271

**Barthrin** ((6-chloro-1,3-benzodioxol-5-yl)methyl 2,2-dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylate) (IRS-trans)-, in *Musca domestica*, poisoning by 207**Bartonellosis, bibliography** 1254, 1255**Basements**

- Culex molestus* in, in Romania 75
- Loxosceles reclusa* in, in Iowa 3430

**Basilia mongolensis mongolensis**, in Mongolia 3011**Basophil degranulation tests**

- for diagnosing hypersensitivity to house-dust mites 1419
- for diagnosing hypersensitivity to Hymenoptera stings 3383

**Bat**

- Acari on, in Uzbekistan 1071
- arboviruses in, in Spain 2233
- Argasidae on, in Indonesia 2807
- ectoparasites of, in Thailand 2805
- Gamasinae on, in Moldavia 1077
- Mitonyssus noctilio* on, in South America 2238

**Nycteriibiidae** on, in Karnataka 2697**Phlebotominae** on, in Panama 2150**Porribius pacificus** on, in New Zealand 2312**Spinturnicidae** on, in Philippines 3416**Streblidae** on, in Karnataka 2697**Trombiculidae** on, in Indiana 1966**Bat, big brown** (see *Eptesicus fuscus*)**Bat dung, arthropods** in, in Massachusetts 2582**Bat, little brown** (see *Myotis lucifugus*)**Bat roosts**

- Cheyletus woodroffei* in, in England 506
- Ornithodoros kelleyi* in

**in Alberta** 954**in Saskatchewan** 954**batatas, Eutrombicula****Bathrooms, Periplaneta americana** in, in Punjab 793**bavarica, Bakerdania****Baygon** (see Propoxur)**Baytex** (see Fenthion)**Bdellonyssus bursa** (see *Ornithonyssus bursa*)**Bear, black** (see *Ursus americanus*)**beatifica, Whitneyomyia****Beauveria**, preparing for SEM of 1687**Beauveria bassiana**

- in
- Culicidae, in USSR 1019
- Nosopsyllus fasciatus*, pathogenicity of 1043

**Beauveria tenella**

- against, *Culex quinquefasciatus* 2641
- culture methods for 2641
- storage of 2641

**Bedding and linens****Dermatophagoides pteronyssinus** in, in UK 1975**Euroglyphus maynei** in, in UK 1975**bedfordi, Phlebotomus** (see *Sergentomyia bedfordi*)**bedfordi, Sergentomyia** (*Phlebotomus*)**Beef, diet component for, Solenopsis invicta** 482**Beef extract, diet component for, Musca domestica** 3356**Beer, bait component for, Blattella****germanica** 2541**beklemishevi, Anopheles****Belgium**

- Cheyletus tenuipilis* in, in house dust 300
- Cordylobia anthropophaga* in, on immigrants 2417

**Hydrophilidae** in, in cattle dung 225**Ixodoidea** in, bibliography 2751**Laminosioptes** spp. in, on zoo birds 3423**Neotrombicula autumnalis** in, on man 2762**Sternostoma tracheacolum** in, on canary 1413**Tabanidae** in 449**tick-borne diseases** in, bibliography 2751**belisariol, Sabethes****Bembix**, in Tajikistan 1617**Bembix bicolor**

- in USSR 1617, 3347
- preying on, Tabanidae, in Tajikistan 1617, 3347

**Bembix gracilis**

- in USSR 1617, 3347
- preying on, Tabanidae, in Tajikistan 1617, 3347

**Bembix kazakhstanica**

- in USSR 3347
- preying on, Tabanidae, in Tajikistan 3347



- Bembix oculata**  
in USSR 1617, 3347  
preying on, Tabanidae, in Tajikistan 1617, 3347
- Bembix transcaspica**  
in USSR 1617, 3347  
preying on, Tabanidae, in Tajikistan 1617, 3347
- Bendiocarb** (2,2-dimethyl-1,3-benzodioxol-4-yl methylcarbamate)  
against  
*Aedes* spp. 2920  
*Anopheles* spp. 2039  
*A. albimanus* 2920  
*A. stephensi*, in dwellings 2912  
*Ctenocephalides felis*, on cat 2325  
*Culex molestus* 401  
*C. pipiens* 2920  
*Monomorium pharaonis* 2726  
*Xenopsylla cheopis* 2325  
formulations of, for ULV 2920  
in building materials, persistence of 2039  
insecticidal activity of 1145, 2325  
on walls, persistence of 401
- bengalensis, Heterometrus (Palamnaeus)**  
**bengalensis, Palamnaeus** (see *Heterometrus bengalensis*)
- benguensis, Leptotrombidium**
- Benin**  
*Haemolaelaps* spp. in 3422  
*Simulium* spp. in 1704
- Benoxafos** (S-[(5,7-dichloro-2-benzoxazolyl)methyl] O,O-diethyl phosphorodithioate)  
resistance to, in, *Boophilus microplus*, in South Africa 939
- Benserazide** (DL-serine 2-[(2,3,4-trihydroxyphenyl)methyl]hydrazide)  
against, *Lucilia cuprina* 1382
- Benzamide, N-[[[5-(4-bromophenyl)-6-methylpyrazinyl]amino]carbonyl]-2,6-dichloro-**  
in *Stomoxys calcitrans*  
inhibition of chitin synthesis by 452  
not inhibiting chitin synthase 3032
- Benzamide, 2-chloro-N-[[[3,5-dichloro-4-(4-nitrophenoxy)phenyl]amino]carbonyl]-**  
against  
*Aedes aegypti* 1453  
*Manduca sexta* 1453  
*Musca domestica* 1453  
*Plodia interpunctella* 1453  
*Tribolium confusum* 1453  
in *Leucophaea maderae*, inhibition of chitin synthesis by 1453  
in *Stomoxys calcitrans*, not inhibiting chitin synthase 3032
- Benzamide, N-[[[4-(chlorophenyl)amino]carbonyl]-2,6-difluoro-** (see Diflubenzuron)
- Benzamide, 2-chloro-N-[[[4-(trifluoromethoxy)phenyl]amino]carbonyl]-**  
against  
*Aedes aegypti* 1453, 1810  
*Chaoborus astictopus*, in ponds 3013  
Chironomidae 1366, 2412  
in ponds 3013  
*Manduca sexta* 1453  
*Musca domestica* 1453  
*Plodia interpunctella* 1453  
*Tribolium confusum* 1453  
in *Apis mellifera*, toxicity of 1014  
in birds, toxicity of 1014  
in fish, toxicity of 1014  
in *Leucophaea maderae*, inhibition of chitin synthesis by 1453  
in ponds, non-target effects of 2412, 3013, 3024  
in *Stomoxys calcitrans*  
inhibition of chitin synthesis by 452  
not inhibiting chitin synthase 3032  
insecticidal activity of 1014
- Benzamide, N,N-diethyl-3-methyl-** (see Deet)
- Benzamide, N,N-diethyl-4-methyl-**, repellent for, *Aedes aegypti* 2374
- Benzamide, 2,6-difluoro-N-[[[4-(trifluoromethyl)phenyl]amino]carbonyl]-**  
against, *Musca domestica* 1368  
in *Musca domestica*, transfer to eggs of 1368
- Benzenamine, 4-chloro-**  
in *Lepomis macrochirus*, diflubenzuron metabolite 2109  
in natural waters, diflubenzuron product 2109
- Benzenamine, 4-chloro-N-1,3-dithietan-2-ylidene-2-methyl-**, against, *Boophilus microplus*, on cattle 700
- Benzenamine, 2,4-dimethyl-N-(3-methyl-2(3H)-thiazolylidene)-**, against, *Ixodes ricinus*, on cattle 253
- Benzene, 1,4-dichloro-**, against, *Aedes sierrensis*, in tree holes 2108
- Benzene, 1,1'-(dichloroethenylidene)bis[4-chloro-** (see DDE)
- Benzene, ethenyl-**  
homopolymer  
*Alphitobius diaperinus* in, damage caused by 2204  
*Dermestes maculatus* in, damage caused by 3057
- Benzene, 1-[(7-ethoxy-3,7-dimethyl-2-octenyl)oxy]-4-ethyl-**, in *Culex pipiens*, effects of 1754
- Benzene, 1-(8-methoxy-4,8-dimethylnonyl)-4-(1-methylethyl)-**  
against, Chironomidae 1366, 2412  
in ponds, non-target effects of 2412, 3024
- Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-** (see DDT)
- Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-** (see Methoxychlor)
- Benzenoacetic acid, 4-chloro- $\alpha$ -(1-methylethyl)-**, cyano(3-phenoxyphenyl)methyl ester (see Fenvalerate)
- Benzenoacetic acid, 4-(difluoromethoxy)- $\alpha$ -(1-methylethyl)-**  
cyano(3-phenoxyphenyl)methyl ester, (S)-  
acaricidal activity of 756  
formulations of 756  
insecticidal activity of 756  
properties of 756  
toxicology of 756
- Benzenoacetic acid,  $\alpha$ -**  
[(dimethoxyphosphinothioyl)thio]-, ethyl ester (see Phenthoate)
- Benzenoacetic acid, 2,4,5-trichloro- $\alpha$ -hydroxy-**, in cattle, tetrachlorvinphos metabolite 1451
- Benzenobutanoic acid,  $\alpha$ ,2-diamino-3-hydroxy- $\gamma$ -oxo-**, in *Lucilia cuprina* eyes, effects of eye colour mutations on 2195
- Benzenobutanoic acid,  $\alpha$ ,2-diamino- $\gamma$ -oxo-**, in *Lucilia cuprina* eyes, effects of eye colour mutations on 2195
- 1,2-Benzenedicarboxylic acid**, dimethyl ester, repellent for, *Aedes aegypti* 2374
- 1,2-Benzenediol, 4-(2-aminoethyl)-** (see Dopamine)
- 1,2-Benzenediol, 4-(2-amino-1-hydroxyethyl)-, (R)-** (see Levarterenol)
- Benzenemethanamine, N-(2-chloroethyl)-N-(1-methyl-2-phenoxyethyl)-** (see Phenoxybenzamine)
- Benzenemethanol,  $\alpha$ -(1-aminoethyl)-2,5-dimethoxy-** (see Methoxamine)
- Benzenemethanol,  $\alpha$ -(aminomethyl)-4-hydroxy-** (see Octopamine)
- Benzenemethanol, 4-chloro- $\alpha$ -(4-chlorophenyl)- $\alpha$ -methyl-** (see Chlorfenethol)
- Benzenemethanol, 3,4-dichloro- $\alpha$ -(trichloromethyl)-**  
acetate  
against  
*Musca domestica* 1430  
*Pediculus capitis* 345  
in fowl, residues of 1430
- Benzenemethanol, 2-hydroxy-**, in *Blattella germanica* tergal-gland secretion 784
- Benzenemethanol, 4-hydroxy-**, in *Blattella germanica* tergal-gland secretion 784
- Benzenemethanol, 2,4,5-trichloro- $\alpha$ -methyl-**, in cattle, tetrachlorvinphos metabolite 1451
- Benzenepropanoic acid,  $\beta$ ,2-dimethyl-4-(1-methylethyl)- $\alpha$ -(3-methyl-1-oxobutyl)-**, ethyl ester, against, *Aedes aegypti* 1986
- Benzenepropanoic acid,  $\alpha$ -hydrazino-3,4-dihydroxy- $\alpha$ -methyl-, (S)-** (see Carbidopa)
- Benzenesulfonamide, 4-amino-N-(5,6-dimethoxy-4-pyrimidinyl)-** (see Sulfadoxine)
- Benzenesulfonamide, 4-amino-N-(1-phenyl-1H-pyrazol-5-yl)-** (see Sulfaphenazole)
- 1,2,4-Benzenetriol, 5-(2-aminoethyl)-**, in *Sarcophaga bullata*, inhibiting vitellogenin synthesis 2701
- Benzimin** (see 1H-Azepine, 1-benzoylhexahydro-)
- 1,3-Benzodioxole, 5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-** (see Piperonyl butoxide)
- 1,3-Benzodioxole, 5-[[7-(3,3-dimethyloxiranyl)-5-methyl-3-heptenyl]oxy]-**, against, *Anopheles quadrimaculatus* 1762
- 1,3-Benzodioxole, 5-[[6-(3,3-dimethyloxiranyl)-4-methyl-3-hexenyl]oxy]-**  
against  
*Aedes taeniorhynchus* 1762  
*Anopheles albimanus* 1762  
*A. quadrimaculatus* 1762
- 1,3-Benzodioxole, 5-[[5-(3,3-dimethylthiiranyl)-3-methyl-2-pentenyl]oxy]-**, not active as insect growth regulator 1988
- 1,3-Benzodioxole, 5-[[1-[2-(2-ethoxyethoxy)ethoxy]ethoxy]-** (see Sesamex)
- 1,3-Benzodioxol-4-ol, 2,2-dimethyl-,** methylcarbamate (see Bendiocarb)
- 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-,** methylcarbamate (see Carbofuran)
- Benzoic acid**  
phenylmethyl ester  
against  
*Demodex* spp., on man 726  
*D. aurati*, on golden hamster 282  
*D. criceti*, on golden hamster 282  
*Sarcoptes scabiei*, on man 291, 1673  
with 2-butyl-2-ethyl-1,3-propanediol, and N-butyl-N-phenylacetamide, repellent for, *Amblyomma americanum*, on man 1937  
with DDT, and disulfiram, against, *Sarcoptes scabiei*, on man 292, 1673  
with disulfiram, against, *Sarcoptes scabiei*, on man 1673  
with lindane  
against  
*Pediculus capitis* 1178  
*Sarcoptes scabiei*, on pig 1959  
sodium salt, diet component for, *Musca domestica* 3356
- Benzoic acid, 4-amino-**  
in *Anopheles stephensi*, effects on *Plasmodium yoelii* of 90  
in *Periplaneta americana*, fate of 546
- Benzoic phosphaphate** (see Phosalone)
- 2H-1-Benzopyran-2-one, Blaberus craniifer**  
responses to 2560
- 2H-1-Benzopyran, 6,7-dimethoxy-2,2-dimethyl-**  
in *Argas persicus*, effects of 1393  
in *Ornithodoros coriaceus*, effects of 1393  
in *Panstrongylus megistus*, effects of 350  
in *Pediculus humanus*, effects of 342  
in *Rhipicephalus sanguineus*, effects of 1393
- 2H-1-Benzopyran, 7-methoxy-2,2-dimethyl-,**  
in *Panstrongylus megistus*, effects of 350
- Benzothiazole**, in *Blattella germanica* tergal-gland secretion 784
- berentienis, Sergentomyia**
- Bergapten** (see 7H-Furo[3,2-g][1]benzopyran-7-one, 4-methoxy-)
- bergeroti, Phlebotomus**
- berlese, Caloglyphus (Sancassania)**
- berlese, Sancassania** (see *Caloglyphus berlese*)
- Bermuda, Orthopteroida** in, book 792
- besti, Uroxys**
- Bezzia, Toxoglugea variabilis**, in, in Sweden 2653
- bezziana, Chrysomya**
- bezzii, Musca**



**Bhanja virus**

- in  
*Amblyomma variegatum*, in Kenya 1641  
*Dermacentor marginatus*, transmission of 2233  
*Ixodes ricinus*, transmission of 2233  
*Rhipicephalus* spp., in Kenya 1641

**BHC (see HCH)** **$\gamma$ -BHC (see Lindane)**

- bianchii*, *Simulium equinum*  
*bianchii*, *Wilhelmia equina* (see *Simulium equinum bianchii*)

**Bibliographies**

- Anopheles albanus* 110  
 Australian entomology 2518, 2519, 2520, 2521, 2522, 2523  
*Cochliomyia hominivorax* 3362  
 insect taxonomy and biology in West Africa 1157  
*Leishmania* and leishmanial diseases 1254, 1255  
 parasites of African wild animals 13  
 pathogens of medically-important arthropods 2517  
 resistance to ticks 979  
 Scorpionidae in Arabian Grand Maghreb 2251  
 ticks and tick-borne diseases in Benelux countries 2751  
*Toxorhynchites* 1241  
 Bicarbonate (see Carbonate, hydrogen)  
*bicinctus*, *Cricotopus*  
*bicolor*, *Bembix*  
*bicolor*, *Hadogenes*  
*bicolor*, *Lutzomyia olmea*  
*bicornis*, *Asca*  
*bicoxalae*, *Schoengastia*  
 Bicyclo[2.2.1]heptan-2-ol, 1,7,7-trimethyl-, acetate, (1*R*-endo-), *Periplaneta americana* responses to 2540  
 acetate, (1*S*-endo-), *Periplaneta americana* responses to 2540  
 Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, *Periplaneta americana* responses to 2540  
 Bicyclo[2.2.1]hept-2-ene, 5-(bromomethyl)-1,2,3,4,7,7-hexachloro- (see Bromocyclen)  
 Bicyclo[3.1.1]hept-3-en-2-ol, 4,6,6-trimethyl-, acetate, (1 $\alpha$ ,2 $\alpha$ ,5 $\alpha$ )-, *Periplaneta americana* responses to 2540  
*bidentata*, *Leptopsylla* (see *Peromyscopsylla bidentata*)  
*bidentata*, *Peromyscopsylla* (*Leptopsylla*)  
*bidentatiformis*, *Neopsylla*  
*bidentatus*, *Cheyletiella*  
*bifarius*, *Tabanus*  
*biguttatus*, *Culicoides*  
*biguttatus*, *Tabanus*  
*bihaicolus*, *Culex*  
*bimaculata*, *Hybomitra*  
 Bioallethrin (see Allethrin, (1*R*-trans)-)  
 S-Bioallethrin (see Allethrin, [1*R*-[1 $\alpha$ (S\*),3 $\beta$ ]]-)  
 Biological clocks, book 20, 1723  
 Biological control  
 of arthropods (see also Sterile-insect release and individual pathogens)  
*Aedes* spp., in wildlife areas 2121  
*Anopheles* spp. 3194  
*A. sinensis*, in rice-fields 1728  
 Chironomidae 1911  
*Chironomus decorus* 670  
*Culex* spp., in rice-fields 1728  
 Culicidae 1706, 2346  
 economics of 2095  
 in irrigation systems 3272  
*Glossina* spp. 437, 1325  
*Musca domestica* 367, 931  
*Simulium* spp. 1702  
*Solenopsis invicta* 3384  
*Stomoxys calcitrans* 367, 1090  
*Supella longipalpa* 1737  
 vectors 6  
 microbial agents for 1534, 3118  
 mammalian safety of 2799  
 non-target effects of 2258  
 review 1680  
 nematodes for 1538  
 book 1134  
 review 2610  
 pathogens for 2839

**Biological control contd.**

- of arthropods contd.  
 problems with 2262  
 Protozoa for 1539  
 review 3136  
 selecting of agents for 1895  
 of molluscs, *Cionella lubrica* 2727  
 of plants  
 aquatic weeds 3272  
*Myriophyllum spicatum* 2345  
*Potamogeton pectinatus* 2345  
 of vertebrates, rabbit 2323  
 Biopermethrin ((3-phenoxymethyl)methyl (1*R*-trans)-3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate)  
 against  
*Anopheles quadrimaculatus* 1193  
*Psorophora columbica* 1193  
 in *Periplaneta americana*, neurotoxicity of 3435  
 resistance to, in  
*Anopheles stephensi* 3238  
*Culex quinquefasciatus* 392  
 and cross-resistance 2353  
 synergists for, piperonyl butoxide as 1193  
 Bioresmethrin ([5-(phenylmethyl)-3-furanyl)methyl (1*R*-trans)-2,2-dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylate)  
 against  
*Anopheles atroparvus* 75  
*Blattella germanica* 1143, 1144  
*Culex molestus* 75, 401  
 Culicidae 2111  
*Musca domestica* 1143, 1144, 1378  
*Panstrongylus megistus* 1507  
 in rat, toxicity of 1452  
 in *Rhodnius prolixus*, effects on neurosecretory system of 1182  
 on walls, persistence of 401  
 synergists for, piperonyl butoxide as 1143  
 with [1*R*-[1 $\alpha$ (S\*),3 $\beta$ ]]-allethrin, against, *Aedes aegypti* 1245  
 BIP (see *Bacillus thuringiensis* var. *causicus*)  
 [1,1'-Biphenyl]-4-pentanoic acid,  $\beta$ -methyl-, in *Rhodnius prolixus*, metamorphosis inhibition by 804  
*bipustulatum*, *Sphaeridium*  
 Birds  
 Argasidae on, in Indonesia 2807  
 arthropod parasites of, in Kirghizia 1033  
 bacteria in, in Kirghizia 1033  
*Culex pipiens* on, in Honshu 2907, 2908  
 Culicidae on, in South Africa 84  
*Culicoides* spp. on, in South Africa 84  
*Culiseta melanura* on, in New York State 1529  
 Diptera on  
 in Ukraine 1024  
 in USSR 1021  
 ectoparasites of, in Thailand 2805  
*Frontopsylla frontalis* on, in China 567  
*Haemaphysalis japonica* on, in Maritime Territory 2734  
*H. punctata* on, in German Federal Republic 956  
 in *Acacia* woodland, effects of endosulfan on 872  
*Ixodes* spp. on, in German Federal Republic 956  
 Ixodidae on, in Oklahoma 2465  
 Ixodoidea on, in Morocco 3403  
*Laminosiptes* spp. on, in Antwerp Zoo 3423  
 Mallophaga on  
 in Hungary 2012  
 in Spain 340  
*Ornithodoros amblyus* on, in Peru 275  
 phenothiazine in, toxicity of 1012  
 Phlebotominae on, in Panama 2150  
*Phlebotomus duboscqi* on, in Senegal 2147  
 Phthiraptera on  
 in Afrotropical region, book 1177  
 in New Zealand 1494  
 preying on  
*Fucellia capensis*, in South Africa 2439  
*Hydrotaea irritans*, in Irish Republic 2182

**Birds contd.**

- Prosimulium subtibbelesi* on, in Hokkaido 2665  
 Saint Louis encephalitis, virus in, in Brazil 2898  
 Siphonaptera on  
 in Michigan 2585  
 in New Zealand 2312  
 SIR-8514 in, toxicity of 1014  
 Birds' nests  
 arthropods in, overwintering of 2005  
 insects in, in UK 776  
*Macrocheles* spp. in, in Kermadec Islands 3092  
*Rhodnius pallescens* in, in Panama 2576  
*birneyi*, *Geomydoecus*  
*birulai*, *Corrodopsylla* (*Doratomyia*)  
*birulai*, *Doratomyia* (see *Corrodopsylla birulai*)  
 Bisabolol (see 3-Cyclohexene-1-methanol,  $\alpha$ ,4-dimethyl- $\alpha$ -(4-methyl-3-pentenyl)-)  
 Bisazir (see Phosphinothioic amide, P,P-bis(1-aziridinyl)-N-methyl-)  
 biseta, *Neopsylla*  
 bishoppi, *Eucheyletiella*  
 bishoppi, *Hippelates* (see *Liohippелates bishoppi*)  
 bishoppi, *Liohippелates* (*Hippelates*)  
*bisinuata*, *Genoneopsylla*  
*bisocodentatus*, *Ctenophthalmus*  
*bison*, *Bubas*  
*bispinosa*, *Haemaphysalis*  
*bitaeniorhynchus*, *Culex*  
 Bites and stings  
 in man  
 by *Argas brumpti* 1942  
 by Buthidae 1428  
 by *Buthus* 1007  
 by Culicidae 1764  
 by *Heterometrus* 1007  
 by Hymenoptera 1930, 3052  
 by insects 1630  
 by *Latrodectus mactans* 3113  
 by *Lyctocoris campestris* 564  
 by Scorpiones 1427, 2256  
 by spiders 1478  
 by *Vespula* 915  
 in pig, by *Vespula* 914  
*Blaberus*, neurosecretory system in 2289  
*Blaberus craniifer*  
 olfactory responses in 2560  
 sarcoplasmic reticulum vesicles in, calcium uptake by 2549  
*Blaberus discoidalis*  
 dieldrin in  
 metabolism of 332, 2010  
 uptake of 332  
 sesamex in, inhibiting dieldrin metabolism 332  
*Blaberus fuscus* (see *B. craniifer*)  
 Blackbird (see *Turdus merula*)  
 Blackbird, red-winged (see *Agelaius phoeniceus*)  
 blakei, *Cheyletiella*  
 Blankaartia  
 habitats of 2811  
 in West Malaysia 2811  
*Blankaartia acutellaris*  
 in Malaysia 981  
 on man 981  
 on rat 981  
*Blankaartia dohanyii*  
 sp. nov., description of 981  
 in Indonesia 981  
 in *Egretta intermedia*, in West Irian 981  
*Blarina brevicauda*  
*Leptinus americanus* on, in West Virginia 3378  
*Nearctopsylla pfitzeri* on, in Tennessee 2867  
*Blatta orientalis*  
 attractants for 1983  
 bacteria in, in UK 3157  
 biology of 788  
 control of 335  
 insecticides for 788  
 traps for 2542  
 in East Germany 335  
 in Netherlands 1740  
 in Turkey 788  
 in UK 1139, 1141, 3157  
 parasitised by, *Tetrastichus hagenowii* 2550



- Blatta orientalis** *contd.*  
 sternal gland in, functions of 3163
- Blattaria**  
 control of, insecticides for 311  
 cuticle in 1159  
 health hazards from 1141  
 in Bermuda, book 792  
 in Netherlands 1740  
 in Nigeria 2003  
 in Quebec 551  
 in hospitals, in England 1141  
 insecticide resistance in 1479  
 nervous system in 3156  
 on man, hypersensitivity to 2132  
 salivary glands in 2477  
*Salmonella* spp. in, in Uttar Pradesh 795
- Blattella**, tracheoles in 2835
- Blattella germanica**  
 attractants for 1983  
 biology of 788  
 control of 335  
   antifeedants for 317, 2796  
   growth regulators for 1015  
   insecticides for 657, 758, 759, 771, 788, 796, 1143, 1144, 1437, 1440, 1441, 1733, 2502  
   evaluating of 2841  
   traps for 2542  
 courtship in 26, 2557  
 DDT resistance in, associated with insensitive ATPase 1736  
 enzymes in 1736  
 gut in 1738  
 in East Germany 335  
 in Netherlands 1740  
 in Turkey 788  
 in UK 1139, 1141  
 in USA 796  
 in buildings, assessing infestations of 2541  
 in dwellings, in California 796  
 insecticide avoidance by 1140  
 locomotion in 2557  
 neurosecretory system in 2289  
*Salmonella typhimurium* in, transmission of 1730  
 sex pheromone of, responses to components of 549  
 spermiogenesis in, achrosome formation during 790  
 spiculum copulatus in 2555  
 tergal glands in 784  
*Tetrastichus hagenowii* not parasitising 2550  
 vitellins in 2007
- Blephariceridae**, palpal sensilla in 3309
- Blepharitis** (see Eyelid diseases)
- Blesbok** (see *Damaliscus dorcas*)
- Blood**, diet component for, *Forcipomyia taiwana* 418
- Blood meal**  
 bait component for, *Cochliomyia hominivorax* 1132, 2169  
 diet component for, *Cochliomyia hominivorax* 1918
- Blood-meals**  
 in *Aedes aegypti*  
   determination of excretory products from 1564  
   digestion of 3196  
   effects on mid-gut of 1527  
 in *Aedes togoi*, measuring volume of 2909  
 in *Anopheles freeborni*, ovarian regulation of retention of 848  
 in *Glossina*, identifying of 3322  
 in *Haematobia irritans*, measuring size of 1913  
 in mites, identification of 1954  
 in *Stomoxys calcitrans*, stimulating incorporation of glucose into glycerides 3028  
 in Tabanidae  
   effects on life-span of 1921  
   size of 1899  
 in *Triatoma infestans*, identification of 1506
- Blood pressure, high** (see Hypertension)
- Blood pressure, low** (see Hypotension)
- Bluetongue virus**  
 in  
   cattle  
     in Australia 866
- Bluetongue virus** *contd.*  
 in *contd.*  
   cattle *contd.*  
     in Western Australia 2142  
   *Culicoides* spp., in Australia 866  
   *C. nubeculosus*  
     infectivity of 2650  
     replication of, aided by *Onchocerca cervicalis* 630  
   *C. variipennis*  
     detecting of 627  
     in Idaho 3282  
     livestock, in Australia 2652  
   *Lutzomyia longipalpis*, replication of 138  
   sheep  
     in Idaho 3282  
     in Sudan 1520
- Blumea erianthi**, insecticidal activity of extracts of 2056
- Blumea malcomii**, insecticidal activity of extracts of 2056
- Blumea oxydonata**, insecticidal activity of extracts of 2056
- Boettcherisca peregrina**  
 cell cultures from 886  
 control of, growth regulators for 464  
 enzymes in 3363  
 methoprene in, development inhibition by 464  
 moulting hormones in, inactivation and reactivation of 1377
- Boettcherisca septentrionalis**, in China 216
- Bogs**, alder, *Culicidae* in, in Belorussia 841
- Bolivia**  
*Mitonyssus noctilio* in, on bats 2238  
 Triatominae in 1474
- Bombyliidae**  
 in Arabian Peninsula 2532  
 parasitising  
   *Glossina* spp. 437  
   *Hybomitra lasiophthalma*, in Texas 2167
- Bombyx mori**  
 enzymes in 2995  
 gut in, passage of proteins through 200  
*Naja mossambica* venom in, toxicity of 200  
 on man, hypersensitivity to 319  
 pyrethroids in, toxicity of 1446
- bonariensis**, *Bothriurus*
- bonneae**, *Chagasia*
- bonneae**, *Mansonia*
- Book notices and reviews**  
 Atkins, M.D., Introduction to insect behavior [En] 535  
 Autrum, H. (Editor), Handbook of sensory physiology. Vol. VII/6B. Comparative physiology and evolution of vision in invertebrates. B: invertebrate visual centers and behaviour I. [En] 2004  
 Balashov, Yu.S. (Editor), Atlas of the electron microscopic anatomy of ixodid ticks [Ru] 719  
 Bateman, P.L.G., Household pests. A guide to the identification and control of insect, rodent, damp and fungoid problems in the home [En] 7  
 Begon, M., Investigating animal abundance: capture-recapture for biologists [En] 531  
 Beř-Bienko, G.Ya., General entomology (ed. 3, enlarged) [Ru] 2823  
 Berdyev, A., The ecology of ixodid ticks of Turkmenistan and their role in the epizootiology of natural-focal diseases [Ru] 2747  
 Berridge, M.J.; Treherne, J.E.; Wigglesworth, V.B. (Editors), Advances in insect physiology (vol. 15) [En] 1159  
 Blackman, R.L.; Hewitt, G.M.; Ashburner, A. (Editors), Insect cytogenetics [En] 1995  
 Blanton, F.S.; Wirth, W.W., Arthropods of Florida and neighbouring land areas. Volume 10. The sand flies (*Culicoides*) of Florida (Diptera: Ceratopogonidae) [En] 131
- Book notices and reviews** *contd.*  
 Bot, J.; Vermeulen, J.B.; Hollings, N., A guide to the use of pesticides and fungicides in the Republic of South Africa (ed. 23) [En] 1984  
 Bottrell, D.R., Integrated pest management [En] 2833  
 Brady, J., Biological clocks [En] 20  
 Brener, Z.; Andrade, Z.A. (Editors), *Trypanosoma cruzi* and Chagas' disease [Pt] 1504  
 Bruce-Chwatt, L.J., Essential malariaology [En] 2380  
 Busvine, J.R., Insects and hygiene. The biology and control of insect pests of medical and domestic importance (ed. 3) [En] 322  
 Carne, P.B. *et al.* (Compilers), Scientific and common names of insects and allied forms occurring in Australia [En] 1454  
 Cloudsley-Thompson, J.L., Biological clocks. Their functions in nature [En] 1723  
 Dickerson, W.A. *et al.*, Arthropod species in culture in the United States and other countries [En] 1999  
 Doszhanov, T.N., Blood-sucking flies (Diptera, Hippoboscidae) of Kazakhstan [Ru] 681  
 Eason, G.; Coles, C.W.; Gettinby, G., Mathematics and statistics for the bio-sciences [En] 2  
 Eichler, W., Fundamentals of veterinary medical entomology [De] 1152  
 Farmer, J.N., The Protozoa. An introduction to protozoology [En] 2259  
 Fripp, P.J., An introduction to human parasitology with reference to southern Africa [En] 1153  
 Gillott, C., Entomology [En] 540  
 Goode, J., Insects of Australia [En] 3151  
 Gupta, A.P. (Editor), Insect hemocytes. Development, forms, functions and techniques [En] 544  
 Hennig, W., Insect phylogeny [En] 2511  
 Hinton, H.E., Biology of insect eggs (3 vols.) [En] 2280  
 Hollis, D., Animal identification, a reference guide. Volume 3. Insects [En] 538  
 Hull, W.B.; Odland, G.C. (Editors), Directory of North American entomologists and acarologists [En] 2269  
 Kevan, D.K.McE., The orthopteroid insects of the Bermudas [En] 792  
 Knight, F.B.; Heikkinen, H.J., Principles of forest entomology (ed. 5) [En] 1151  
 Kolonin, G.V., World distribution of ixodid ticks (genus *Haemaphysalis*) [Ru] 501  
 Ledger, J.A., The arthropod parasites of vertebrates in Africa south of the Sahara. Volume IV. Phthiraptera (Insecta) [En] 1177  
 Locke, M.; Smith, D.S. (Editors), Insect biology in the future. 'VBW 80' [En] 1725  
 Maramorosch, K.; Hirumi, H. (Editors), Practical tissue culture applications [En] 1467  
 May, R.M. (Editor), Theoretical ecology. Principles and applications (ed. 2) [En] 3146  
 McAlpine, J.F. *et al.* (Coordinators), Manual of Nearctic Diptera (vol. 1) [En] 2587  
 Menzie, C.M., Metabolism of pesticides. Update III [En] 2790  
 Miller, T.A. (Editor)  
   Cuticle techniques in arthropods [En] 3131  
   Neurohormonal techniques in insects [En] 3144  
 Mittler, T.E.; Radovsky, F.J.; Resh, V.H., Annual review of entomology (vol. 26) [En] 3133

Book notices and reviews *contd.*

- Molineaux, L.; Gramiccia, G., The Garki project. Research on the epidemiology and control of malaria in the Sudan savanna of West Africa [En] 829
- Mordue, W.; Goldsworthy, G.J.; Brady, J.; Blaney, W.M., Insect physiology [En] 1685
- Morel, P.C., Study on Ethiopian ticks (Acarida, Ixodida) [En] 951
- Nepoklonov, A.A.; Khipe, T.; Shplistezer, Kh.; Dorzh, Ts., Diseases of animals caused by bot-flies [Ru] 2691
- Niyazov, O. D. (Editor), Ecological-faunistic complexes of insects in south-western Turkmenistan [Ru] 2826
- Poinar, G.O., Jr., Nematodes for biological control of insects [En] 1134
- Price, P.W., Evolutionary biology of parasites [En] 536
- Riegert, P.W., From arsenic to DDT. A history of entomology in western Canada [En] 2539
- Roelofs, W.L. (Editor), Establishing efficacy of sex attractants and disruptants for insect control [En] 1983
- Scrivenor, Sir T., CAB – the first 50 years [En] 752
- Service, M.W., A guide to medical entomology [En] 539
- Shcherbak, G.I., Mites of the family Rhodacaridae of the Palaearctic [Ru] 1006
- Sittig, M. (Editor), Pesticide manufacturing and toxic materials control encyclopedia [En] 2787
- Skaife, S.H.; Ledger, J. (Reviser), African insect life (ed. 2) [En] 775
- Steinmann, H.; Zombori, L., An atlas of insect morphology [En] 2512
- Strausfeld, N.J.; Miller, T.A. (Editors), Neuroanatomical techniques. Insect nervous system [En] 3143
- Van den Bosch, R., The pesticide conspiracy [En] 1432
- van der Hammen, L., Glossary of acarological terminology. Vol. 1: General terminology [En] 1957
- Wegler, R. (Editor), The chemistry of plant-protection and pest-control products. Vol. 6. Insecticides, bactericides, oomycete fungicides, biochemical and biological methods, natural products [De, En] 2262
- Wittmer, W.; Bütticker, W. (Editors), Fauna of Saudi Arabia. Vol. 2 1980 [En, De, Fr] 2526
- Wood, D.M.; Dang, P.T.; Ellis, R.A., The insects and arachnids of Canada. Part 6. The mosquitoes of Canada. Diptera: Culicidae [En] 1533
- Boophilus**
- Congo virus in, transmission of 1945
- control of 1480, 2224, 3393
- Dermatophilus congolensis* in, transmission of 777
- in Indonesia 925
- on cattle
- in Costa Rica 3393
- in Nigeria 245
- in South Africa 2224
- on livestock, in Mongolia 1480
- preyed on by, *Buphagus erythrorhynchus*, in South Africa 1643
- taxonomy of 2476
- Boophilus annulatus**
- chromosomes in 3071
- development in, abnormal 2475
- in Egypt 2475, 2752, 3394
- in French Polynesia 1943
- in India 1401
- in Spain 1117
- insemination in 1935
- life-span in 1935
- on cattle
- in Egypt 3394
- in French Polynesia 1943
- in Karnataka 1401
- on *Cervus elaphus*, in Spain 1117
- oviposition in 494
- parthenogenesis in 1935
- Boophilus annulatus** *contd.*
- seasonal abundance of 1401, 3394
- spermatogenesis in 3071
- Boophilus annulatus** × **B. microplus**, sterility in 2739
- Boophilus calcaratus**
- Babesia bigemina* in, infectivity of, effects of diminazene aceturate on 1069
- B. colchica* in, infectivity of, effects of diminazene aceturate on 1069
- control of, acaricides for 955
- habits of 1072
- in USSR 1072
- in Yugoslavia 701
- Boophilus decoloratus**
- Anaplasma marginale* in, transmission of 950
- Babesia* spp. in
- detecting of 1109
- transmission of 948
- control of
- acaricides for 757
- testing of 1406
- grasses for 1722
- eggs of, lipids in 2210
- in South Africa 757, 948, 1645, 2468
- in Zimbabwe 937, 1638
- on cattle
- in South Africa 948, 1645
- in Zimbabwe 937
- preyed on by
- Buphagus erythrorhynchus* 1643
- in South Africa 2468
- seasonal abundance of 1638
- Boophilus geigyi**, *Babesia* spp. in, detecting of 1109
- Boophilus microplus**
- acaricide resistance in, in South Africa 939
- aggregation in 1460
- functions of 964
- Anaplasma* spp. in, transmission of 2832
- A. marginale* in, transmission of 938, 949, 950, 961, 2836, 2837
- Babesia* spp. in, transmission of 948, 1938, 2832
- B. bigemina* in
- development of 1394
- enzymes in 264
- transmission of 947, 2221
- ultrastructure of 264
- B. bovis* in
- pathogenicity of, effects of blood passing on 3088
- transmission of 947, 2221
- biology of 2476
- cell cultures from 2226, 3412
- chromosomes in 3071
- control of 258, 259, 260, 2476
- acaricides for 696, 700, 757, 939, 961, 975, 1124, 1126, 2218, 2746, 2837, 3068
- testing of 1406
- economics of 1924
- integrated 1124
- pasture rotation for 961
- descriptions of 2476
- development in 1129
- effects of temperature on 1461
- distribution of 2476
- embryonic development in 1125
- enzymes in 2217
- ethion resistance in, in New Caledonia 3068
- in Australia 258, 259, 260, 938, 959, 961, 1938, 2742, 2832, 3072
- in Colombia 700, 2218
- in India 2746
- in Jamaica 2463
- in Malagasy Republic 3060
- in Malaysia 2538
- in Mexico 1124, 1126, 1460, 1461, 1640
- in New Caledonia 3068
- in New Hebrides 3061
- in Nicaragua 757
- in Philippines 2804
- in South Africa 939, 948
- insemination in 1935
- life-span in 1935
- nervous system in 3407
- on *Bos indicus* × *B. taurus* in Queensland 259
- resistance to 260
- Boophilus microplus** *contd.*
- on *Bos taurus* × *B. indicus*
- hyperemia caused by 3073
- in Queensland 961
- resistance to 2742
- on cattle
- antienzymes to 2217
- distribution pattern of 1126
- eosinophils transporting histamine to attachment sites of 2471
- hyperemia caused by 3073
- immunity to, effects of *Babesia* on 1938
- in Andaman and Nicobar Islands 2746
- in Colombia 700, 2218
- in Jamaica 2463
- in Mexico 1124, 1460, 1640
- in New Hebrides 3061
- in Queensland 258, 259, 260
- in South Africa 948
- resistance to 2476
- dermal vasculature and 3072
- role of histamine in 1395
- seasonal variation in 959
- transfer from herbage of 964
- on guinea-pig, antienzymes to 2217
- on zebu
- in Australia 938
- in Malaysia 2538
- in Queensland 259
- oviposition in 256, 1129
- parthenogenesis in 1935
- population dynamics of, model 928
- preyed on by, Myrmicinae, in Mexico 1129
- proteolytic-enzyme inhibitor in 960
- saliva in, smooth-muscle-contracting substances in 263
- salivary glands in 2477
- seasonal abundance of 3061
- spermatogenesis in 3071
- taxonomy of 2476
- Trypanosoma vivax* in, infectivity of 2466
- veterinary importance of 3060
- weight of eggs and females of 713
- Boophthora erythrocephala** (see *Simulium erythrocephalum*)
- Boopia**, on Marsupialia, in Western Australia 2565
- Boopliidae**, on Marsupialia, in Western Australia 2565
- borealis**, **Polyplax**
- Boric acid**
- against
- Blattaria 788
- Blattella germanica*, in dwellings 796
- Monomorium pharaonis* 693, 2726
- Borneol** (see Bicyclo[2.2.1]heptan-2-ol, 1,7,7-trimethyl-, endo-)
- Borrelia duttoni**, in, *Ornithodoros moubata*, transmission of 3060
- Borrelia recurrentis**, in, *Pediculus* spp., transmission of 34
- Borrelia theileri**, in, *Boophilus microplus*, transmission of 3060
- Bos indicus** (see Zebu)
- Bos indicus** × **B. taurus**
- Amblyomma americanum* on
- development of 1936
- fecundity of 1936
- Boophilus microplus** on
- in Queensland 259
- resistance to 260
- Haemaphysalis longicornis* on, resistance to 3079
- tick control on 258, 259
- Bos taurus** (see Cattle)
- Bos taurus** × **B. indicus**
- Anaplasma marginale* in, in Queensland 961
- Boophilus microplus** on
- hyperemia caused by 3073
- in Queensland 961
- resistance to 2742
- Chrysomya bezziana* on, effects of 663
- Bosmina coregoni**
- in USA 3024
- in ponds, effects of insect growth regulators on 3024
- Bothriuriidae**, in Argentina 1477



## Subject Index

- Bothriurus**  
in Argentina 1477  
metasomatic glands in 524
- Bothriurus araguayae**  
in Brazil 744  
taxonomy of, raised from subspecies of *B. asper* 744
- Bothriurus asper araguayae**, taxonomy of, raised to specific rank 744
- Bothriurus bonariensis**, taxonomy of 744
- Botswana**  
*Demodex cafferi* in, on African buffalo 2241  
*Glossina* spp. in 2163  
*G. morsitans* in 872
- Botulism** (see also *Clostridium botulinum*)
- Boutonneuse fever**, tick transmission of 3137
- Bovicola bovis** (see *Damalinia bovis*)
- Bovicola ovis** (see *Damalinia ovis*)
- Bovine epizootic abortion**, causal agent, *Chlamydia* implicated as 267
- bovinus, Tabanus**
- bovis, Bovicola** (see *Damalinia bovis*)
- bovis, Chorioptes**
- bovis, Damalinia** (*Bovicola*)
- bovis, Demodex**
- bovis, Hypoderma**
- Boydaiia nigra**  
in USA (Hawaii) 2237  
on *Passer domesticus*, in Hawaii 2237
- Brachicola devia**, in China 216
- Brachinus costipennis**, in USA 415
- Brachistosternus**  
in Argentina 1477  
metasomatic glands in 524
- brachyantherum, Eusimulium** (see *Simulium brachyantherum*)
- brachyantherum, Simulium** (*Eusimulium*)
- Brachycera**, in Nearctic region, book 2587
- Brachydeutera argentata**  
in USA 1814  
in animal waste lagoons, effects of organic pollution on 1814
- brachyurum, Diaphanosoma**
- bradleyi, Anopheles**
- Bradycardia**, in guinea-pig, caused by *Leirus quinquestriatus* venom 309
- Bradycellus nitidus**, in USA 415
- Bradydipicola**, on sloth, in Americas 1632
- Bradydiphila**, on sloth, in Americas 1632
- Bradypus tridactylus**  
*Trichillum adisi* on, in Brazil 3379  
*Uroxys besti* on, in Brazil 3379
- brakeleyi, Corethrella**
- brasiliensis, Triatoma**
- brasiliensis, Xenopsylla**
- Brassica oleracea var. capitata** (see Cabbage)
- brassicace, Barathra** (see *Mamestra brassicae*)
- brassicace, Brevicoryne**
- brassicace, Mamestra** (*Barathra*)
- Brazil**  
*Aedes* spp. in, viruses in 2898  
*Anopheles cruzii* in 1202, 1203, 1204  
*A. darlingi* in 1767  
on man 1793  
arboviruses in 2897  
Chagas' disease in 811  
*Chagasia bonneae* in, on man 1769  
*Chrysomya* spp. in 195  
*Cochliomyia macellaria* in, bacteria in 479  
*Culex* spp. in, viruses in 2898  
*C. adamesi* in 584  
*C. machadoi* in 2049  
*C. quinquefasciatus* in, on man 2383, 2655, 2656, 2657  
Culicinae in 2072  
*Culicoides paraensis* in  
on man 2655, 2656, 2657  
viruses in 3224  
*Haemagogus* spp. in  
on man 2627  
viruses in 2627  
*Haematopinus tuberculatus* in, on Asian buffalo 2250  
*Lepisela crassipes* in, on man 2187  
*Lutzomyia amazonensis* in 1256  
*L. davi* in 2390  
*L. intermedia* in, in poultry housing 2970
- Brazil contd.**  
*Lutzomyia* contd.  
*L. llanosmartinsi* in, on man 1257  
malaria control in 1202  
malaria in 1767  
*Mansonella pseudotitillans* in, viruses in 2898  
mites in  
in house dust 3094  
on rodents 2491  
*Musca domestica* in, bacteria in 479  
onchocerciasis in 870  
*Ophyra aenescens* in, bacteria in 479  
*Panstrongylus megistus* in, in dwellings 812  
*Polygenis tripus* in, natural enemies of 3185  
*Sabethes belisarioi* in, viruses in 2898  
*Simulium* spp. in  
filariae in 1580  
on man 1269  
*S. argentiscutum* in  
nematodes in 2399  
on man 2399  
*S. sanguineum* in 870  
*S. spinibranchium* in 2155  
Siphonaptera in, on rodents 1751  
*Solenopsis invicta* in, natural enemies of 1627  
*S. saevissima* in, natural enemies of 1627  
*Stenotabanus* spp. in, on man 2187  
*Stomoxys calcitrans* in, on horse 1908  
systematic entomology in 1989  
*Triatoma* spp. in 2574  
*T. infestans* in  
in dwellings 812, 2293, 2294  
on man 3167  
*T. melanocephala* in, flagellates in 2296  
*T. sordida* in, in dwellings 812  
Triatominae in 811  
in dwellings 807, 1137, 1744, 2299  
natural enemies of 42  
*Trichillum adisi* in, on *Bradypus* 3379  
*Tunga penetrans* in, on man 48  
*Uroxys besti* in, on *Bradypus* 3379
- braziliensis, Anopheles**
- Bread**  
bait component for, *Blattella germanica* 2541  
dichlorvos in, uptake from air of 2267  
naled in, uptake from air of 2266, 2267
- breinli, Armigeres**
- Breinlia booliati**  
in  
*Aedes aegypti*, effects on adipose tissue of 59  
*A. togoi*, effects on adipose tissue of 59  
*Armigeres durhami*, not affecting refractoriness to *Brugia malayi* 1774  
*A. subalbatus*, not affecting refractoriness to *Brugia malayi* 1774
- Brevicoryne brassicae**, control of, insecticides for 2507
- brevidens, Eusimulium** (see *Simulium brevidens*)
- brevidens, Simulium** (*Eusimulium*)
- brevipalpis, Eadiea**
- brevipalpis, Glossina**
- brevipalpis, Toxorhynchites**
- brevis, Cimex**
- brevis, Demodex**
- brevis, Whartonia**
- brevitarsis, Culicoides**
- Brewers' yeast**  
diet component for  
*Aedes detritus* 368  
*Anopheles annularis* 2059
- British Columbia**  
*Aedes togoi* in, natural enemies of 397  
*Anopheles punctipennis* in 384  
*Culex tarsalis* in 384  
*C. territans* in 384  
Culicidae in, natural enemies of 1243  
*Cuterebra grisea* in, on *Microtus* 1340  
*Depressaria angustata* in, on *Cicuta douglasii* 2617  
*Dermatophagoides farinae* in, in house dust 1671  
*D. pteronyssinus* in, in house dust 1671
- British Columbia contd.**  
*Eadiea neurotrichus* in, on *Neurotrichus* 2236  
entomology in 2539
- British Isles**  
Aculeata in 691  
Mesostigmata in 302  
Parasitinae in 1960  
Vespinae in, book 484
- Bromeliaceae**  
*Culicoides pancensis* on, in Colombia 2141  
*Triatoma melanocephala* on, in Brazil 2296
- bromeliae, Aedes**
- bromius, Tabanus**
- Bromocet** (see Pyridinium, 1-hexadecyl-, bromide)
- Bromocyclen** (5-(bromomethyl)-1,2,3,4,7,7-hexachlorobicyclo[2.2.1]hept-2-ene)  
against  
*Cheyletiella blakei*, on cat 515  
*Ctenocephalides felis*, on cat 2325  
*Sarcoptes scabiei*, on pig 1959
- Bromophos** (O-(4-bromo-2,5-dichlorophenyl) O,O-dimethyl phosphorothioate)  
against  
Blattaria 788  
*Cimex lectularius* 1184  
*Dermestes maculatus*, in poultry housing 3057  
*Musca domestica* 773, 2191  
*Stomoxys nigra*, on cattle 203  
in building materials, persistence of 773  
resistance to, in, *Musca domestica*, in German Democratic Republic 3350
- Bromophos-ethyl** (O-(4-bromo-2,5-dichlorophenyl) O,O-diethyl phosphorothioate)  
against  
*Amblyomma* spp. 703  
*Boophilus microplus* 939
- Bronchial provocation tests**, for diagnosis of hypersensitivity to house-dust mites 992
- Brucella**, in, Ixodidae, transmission of 3413
- Brucellosis**, in USSR 3413
- Brugia**, in, *Mansonia* spp., transmission of 3225
- Brugia malayi**  
control of  
anthelmintics for 2140  
vector control for 2057, 2140
- in  
*Aedes* spp., inheritance of susceptibility to 2631  
*A. polynesiensis*, infectivity of 2036  
*A. togoi*  
counting ingested microfilariae of 2909  
infectivity of, strain differences in 2885  
transmission of 2906  
*Anopheles sinensis*, transmission of 2140  
*Armigeres durhami*, not infective 1774  
*A. subalbatus*, not infective 1774  
man  
in Andhra Pradesh 102  
in China 2140  
in Kerala 2057  
vectors of 2801
- Brugia pahangi**  
in  
*Aedes* spp., inheritance of susceptibility to 2631  
*A. polynesiensis*, infectivity of 2036  
*A. togoi*, infectivity of, strain differences in 2885
- Brugia pateri**  
in  
*Aedes togoi*, development of 68  
*Anopheles atroparvus*, development of 68
- brumpti, Argas**
- Brumptomyia**, in Venezuela 419
- brunnea, Periplaneta**
- brunneri, Elliptorhina** (*Gromphadorhina brunneri*, *Gromphadorhina* (see *Elliptorhina brunneri*))
- brunnescens, Tabanus autumnalis**
- Bubalus bubalis** (see Buffalo, Asian)
- bubalus, Bubs**

- Bubas bison**  
in France 2207  
larval behaviour in 2207  
nest construction in 2207
- Bubas bubalus**  
in Egypt 3374  
in France 2207  
larval behaviour in 2207  
nest construction in 2207  
*Spirocerca lupi* in, in Egypt 3374
- bubulus, Sarcophages scabiei** (see *S. scabiei*)
- buccinator, Arrenurus**
- Budgerigar (Melopsittacus undulatus)**  
Dermoglyphidae on, in Japan 288  
*Knemidokoptes pilae* on, in Queensland 1663  
*Tyrophagus putrescentiae* on, in Japan 288
- buelowi, Guntheria**
- buettikeri, Corethrella**
- Buffalo, African (Syncerus caffer)**  
*Demodex cafferi* on, in Botswana 2241  
*Theileria mutans* in, in East Africa 2474
- Buffalo, Asian (Bubalus bubalis; water buffalo)**  
ectoparasites of, in Philippines 2813  
*Haematopinus tuberculatus* on, effects of 2250  
*Ixodidae* on, in Egypt 2752  
Peaton virus in, antibodies to 1253  
*Psoroptes ovis* on, in Indonesia 2806  
*Sarcophages scabiei* on  
in Indonesia 2806  
transfer to man of 3417  
Tibrogargan virus in, antibodies to 3303
- Buffalo (Asian) dung, Drepanocerus kazirangensis** in, in Assam 2724
- Buffalo dung, Onthophagus kingstoni** in, in Kenya 917
- Bufo bufo, Lucilia bufonivora** on, in Netherlands 222
- bufonivora, Lucilia**
- Building materials, insecticides on,**  
persistence of 203, 2039
- Buildings**  
*Blattaria* in, in UK 1141  
*Blattella germanica* in, assessing infestations of 2541  
*Culiseta annulata* in, in District of Columbia 3248  
insect pests in, in UK 1139  
pest control in 1145
- buisseti, Simulium**
- Bulgaria**  
*Coleoptera* in, helminths in 689  
*Diptera* in, in cattle farms 902  
*Gamasoidea* in, on small mammals 1659  
*Haematopota csikii* in 17  
*Scarabaeidae* in, in cattle dung 1385  
*Trombiculidae* in, on small mammals 1664
- bullata, Sarcophaga**
- α-Bungarotoxin, in Musca domestica,**  
binding of 2194
- Bunting, white-headed** (see *Emberiza spodocephala*)
- Bunting, yellow-throated** (see *Emberiza elegans*)
- Bunyamwera viruses, in, Culex tarsalis, in**  
California 2081
- Bunyaviridae, in, Aedes triseriatus,**  
transmission of, molecular basis of 2630
- Bunyavirus, in, Culicidae, in French Guiana**  
1154
- Buphagus erythrorhynchus**  
acaricides in, toxicity of 1643  
preying on  
*Boophilus decoloratus*, in South Africa 2468  
*Ixodidae*, in South Africa 1643  
*Rhipicephalus appendiculatus*, in South Africa 2468
- Burenella dimorpha**  
in  
*Solenopsis geminata*  
infectivity of 3388  
transmission of 3388
- Burma**  
*Aedes aegypti* in, natural enemies of 1247  
*Hoplopleuridae* in, on small mammals 1496
- Burma contd.**  
*Mesostigmata* in  
on *Bandicota* 2478  
on *Rattus* 1962  
on *Suncus* 2775  
*Trombiculidae* in  
on *Bandicota* 2479  
on *Rattus* 2479
- burmeisteri, Solenopotes**
- Burning, of pastures, effects on Aedes of**  
79
- burnsi, Leptotrombidium pallidum**
- bursa, Bdellonyssus** (see *Ornithonyssus bursa*)
- bursa, Ornithonyssus (Bdellonyssus)**
- bursa, Rhipicephalus**
- Bursera delpechiana, insecticidal activity of**  
oil from 2879
- Bursicon**  
in insects, book 3144  
in *Rhodnius prolixus*, relation of neurohormone release and 2856
- Burundi, Siphonaptera in, on rodents** 49
- Butacarb (3,5-bis(1,1-dimethylethyl)phenyl methylcarbamate)**  
against, *Lucilia cuprina* 194
- 1,4-Butanediamine, N,N'-bis(3-aminopropyl)-, in Ornithodoros savignyi**  
spermatophore 1402
- Butanedioic acid, in Cochliomyia macellaria,**  
accumulating during anaerobic metabolism 1359
- Butanedioic acid, [(dimethoxyphosphinothioyl)thio]-, diethyl ester** (see Malathion)
- Butanedioic acid, hydroxy-, in Cochliomyia macellaria,**  
decreasing during anaerobic metabolism 1359
- Butanedioic acid, [(methoxy(methylthio)phosphiny)thio]-, diethyl ester, in malathion**  
formulations, determination of 526
- Butanedioic acid, oxo-, in Cochliomyia macellaria,**  
unchanged during anaerobic metabolism 1359
- Butanoic acid**  
*Cochliomyia hominivorax* responses to 1896  
repellent for, ovipositing mosquitoes 1209  
2,2,2-trichloro-1-(dimethoxyphosphinyl)ethyl ester (see Butonate)
- Butanoic acid, 4-amino-**  
in *Periplaneta americana*  
effects on activity of head ganglia neurons of 2845  
effects on central neurons of 2842  
effects on giant interneurone synapses of 2559
- Butanoic acid, 2-amino-4-(methylsulfinyl)-, in Culex pipiens,**  
effects of *Romanomermis culicivorax* on 1229
- Butanoic acid, 2-[[2-chloro-4-(trifluoromethyl)phenyl]amino]-3-methyl-, cyano(3-phenoxyphenyl)methyl ester,**  
against, *Musca domestica* 1442
- Butanoic acid, 2-[[2-fluoro-4-(trifluoromethyl)phenyl]amino]-3-methyl-, cyano(3-phenoxyphenyl)methyl ester,**  
against, *Musca domestica* 1442
- Butanoic acid, 3-methyl-, Culex oviposition**  
responses to 1209
- Butanoic acid, 3-methyl-2-(4,5,6,7-tetrafluoro-2,3-dihydro-1H-indol-2-yl)-, cyano(3-phenoxyphenyl)methyl ester,**  
against, *Musca domestica* 1442
- 2-Butanol, Cochliomyia hominivorax**  
responses to 1896
- butantanensis, Hirstionyssus**
- 2-Butenamide, N-ethyl-N-(2-methylphenyl)-**  
(see Crotamiton)
- 2-Butenoic acid, 3-[(dimethoxyphosphinyl)oxy]-, 1-phenylethyl ester, (E)-** (see Crotoxyphos)
- 2-Butenoic acid, 3-[(ethylamino)methoxyphosphinothioyl]oxy]-, 1-methylethyl ester, (E)-** (see Propetamphos)
- Buthidae**  
biology of 745  
digital macrochaetae in 308  
in Argentina 1477  
in Cuba 745  
in Mexico 1676  
in Zimbabwe 1428
- Buthotus, in Zimbabwe** 1428
- Buthotus judaicus, in Israel** 1981
- Buthotus minax occidentalis**  
development in 743  
pullus in 743
- Buthotus trilineatus**  
in Zimbabwe 1428  
on man, stings by 1428
- Buthus, on man, in India** 1007
- Buthus eupeus** (see *Mesobuthus eupeus*)
- Buthus occitanus**  
activity in, rhythm of 315  
in Spain 1427  
in Tunisia 2255  
on man, in Spain 1427  
telson in, abnormalities in 2255  
temperature preferences in, effects of prostaglandins on 3116
- Buthus quinquestratus** (see *Leiurus quinquestratus*)
- Butonate (2,2,2-trichloro-1-(dimethoxyphosphinyl)ethyl butanoate)**  
against, *Haematopinus suis*, on pig 802
- Butter**  
amitraz in, residues of 696  
naled in, uptake from air of 2266
- sec-Butyl alcohol** (see 2-Butanol)
- Butyric acid** (see Butanoic acid)
- bycalia, Laelaps**
- Byssodon maculata** (see *Cnephia maculata*)
- caballus, Aedes**
- Cabbage (Brassica oleracea var. capitata)**  
*Periplaneta americana* on, feeding by 28
- Caccobius krikkeni**  
sp. nov., description of 917  
in Kenya 917  
in African elephant dung, in Kenya 917
- Cache Valley virus**  
in  
*Aedes* spp., in New York State 3246  
*A. taeniorhynchus*, in Jamaica 845  
*Anopheles* spp., in New York State 3246  
*A. grabhamii*, in Jamaica 845  
*Culicidae*, in Manitoba 1809  
*Culiseta inornata*  
replication of 104  
transovarial transmission of 104
- Cachexia, in Asian buffalo, caused by**  
*Haematopinus tuberculatus* 2250
- cadaverina, Pyrellia**
- caedens, Orchopeas**
- Caenopsylla**  
distribution of 2335  
on Ctenodactylidae, in northern Africa 2335
- Caenopsylla laptevi**  
distribution of 2335  
hosts of 2335  
in France 2335  
on *Oryctolagus cuniculus*, in France 2335
- caesar, Lucilia**
- Caffeic acid** (see 2-Propenoic acid, 3-(3,4-dihydroxyphenyl)-)
- cafferi, Demodex**
- caja, Arctia**
- cajennense, Amblyomma**
- calcaratus, Boophilus**
- calcarhebes, Ixodes**
- calcarifer, Ceratophyllus** (see *Megabothris calcarifer*)
- calcarifer, Megabothris (Ceratophyllus)**
- Calcaromyobia australasiae**  
sp. nov., description of 301  
in Australia 301  
on *Miniopterus australis*, in Queensland 301
- Calcaromyobia miniopteris**  
in Australia 301  
on *Chalinolobus gouldii*, in Australia 301  
on *Miniopterus schreibersii*, in Australia 301  
taxonomy of, characters distinguishing *C. australasiae* and 301
- Calcaromyobia rhinolophia**  
in Kenya 301  
on *Rhinolophus lobatus*, in Kenya 301
- calceatus, Ctenophthalmus**
- calcitrans, Stomoxys**



**Calcium**

in *Blaberus craniifer*, uptake by sarcoplasmic reticulum vesicles of 2549

in camel blood, effects of *Haematopinus tuberculatus* on 1175

in *Rhodnius prolixus*, dependence of salivary apyrase on 1509

in *Simulium* breeding water 2666

**Calcium sulfide (CaS<sub>2</sub>)**

against

*Demodex cati*, on *Uncia uncia* 2234

*Trixacarus caviae*, on guinea-pig 510, 1978

**California**

*Aedes* spp. in

in irrigated pastures 2088

in wildlife areas 2121

*A. dorsalis* in, in salt marshes 2087

*A. melanimon* in 79

viruses in 2081

*A. nigromaculis* in 79, 2084, 2111

*A. sierrensis* in 1192

in tree holes 2108

*Anopheles franciscanus* in, nematodes 2083

*A. freeborni* in

in rice-fields 2093

nematodes 2083

arbovirus surveillance in 2080

*Blattella germanica* in, in dwellings 796

*Catallagia sculleni* in, bacteria in 2319

cattle dung in, control of 1932

*Centruroides sculpturatus* in,

introductions of 2495

*Chaoborus astictopus* in 2414, 3013

Chironomidae in 1911, 2118, 2412, 3013

in flood-control channels 3346

in flood-control systems 2413

on man 912

*Chironomus decorus* in 670

*Culex erythrothorax* in 3241

*C. pipiens* in, viruses in 2081

*C. quinquefasciatus* in 3241

in cemetery vases 2916

in storm drains 2113

*C. tarsalis* in 380, 590, 2084, 2101, 2111,

2119

in irrigated pastures 2088

in irrigation canals 2345

in rice-fields 2093, 2115

in salt marshes 2087

viruses in 2081, 3241

Culicidae in 2118

in catch basins 2088

in dairy-waste lagoons 2120

*Culicoides occidentalis* in 2385

*Culiseta incidens* in, in cemetery vases

2916

*C. inornata* in 2084, 2111

nematodes 2083

*Cuterebra lepvora* in 2165

*Demodex zalophi* in, on zoo *Zalophus*

*californianus* 2228, 2229

encephalitis surveillance in 1225

*Eutrombicula batatas* in 982

*Geomydoecus* spp. in, on *Thomomys* 31,

1171

human babesiosis in 3397

*Ixodes pacificus* in 269

on *Reithrodontomys* 1650

*Leptoconops foulki* in, natural enemies of

415

mosquito control in 574, 1225, 1782,

1801, 3203

mosquito surveillance in 2080

*Musca autumnalis* in, in cattle dung

1598

*Opisodasys keeni* in, bacteria in 2319

*Ornithodoros coriaceus* in

bacteria in 267

viruses in 266

*Ornithonyssus sylvarum* in, on fowl

1953

*Pediculus capitis* in, on man 1498

*Peromyscus maniculatus* in, arthropod

parasites of 2002

*Psorophora columbiae* in 2084, 2111

Simuliidae in 2118

*Simulium tescorum* in, on man 2664

*Supella longipalpa* in, natural enemies of

1737

Tabanidae in 2444

**California contd.**

*Trixacarus caviae* in, on guinea-pig 510, 1979

**California encephalitis** (see Encephalitis, California)**California viruses**

in

*Aedes melanimon*, in California 2081

Aedinae, in New York State 3246

**californicum, Trichogramma****californicus, Dicrotendipes****californicus, Geomydoecus****caliginea, Glossina****callidum, Simulium****callidus, Chrysops****Calliphora**

*Clostridium botulinum* in, in Washington State 2186

control of, traps for 895

ecdysone analogues in, activity of 2782

in New Caledonia 3339

in Thailand 662

on pheasant, in Washington State 2186

parasitised by, *Aclista alticolis*, in

Romania 453

taxonomy of 3339

wings in, morphometric characters of

1352

**Calliphora albifrontalis**

in Australia 164, 165

on sheep

in Australia 164

in Western Australia 165

**Calliphora augur**

biology of 2698

descriptions of 893

in Australia 164, 2698

on sheep, in Australia 164

**Calliphora erythrocephala** (see *C. vicina*)**Calliphora hilli**

in Australia 164

on sheep, in Australia 164

**Calliphora nociva**

in Australia 164, 165

in human cadavers, development of 3037

on sheep

in Australia 164

in Western Australia 165

**Calliphora stygia**

descriptions of 893

in Australia 164

moulting hormones in, biosynthesis of

889

on sheep, in Australia 164

**Calliphora vicina**

aging of, mimicking by  $\gamma$ -radiation of

219

attraction of, to hornet nests 1631

body movements and retinal pattern

displacements in 1620

brain in 887

peptides in 2711

control of, insecticides for 1440

diapause in, inheritance of 894

enzymes in 882, 1761, 2189

eyes in 2714

UV sensitivity of 2177

feeding behaviour in, effects of fixation on

201

flight in, regulation of 3045, 3046

gut in 1605

passage of proteins through 200

hemolymph in, developmental changes in

882

in Australia 164

in Romania 453

in USA 1346, 1631

in USSR 894

insect growth regulators in, effects on

protein and nucleic acid synthesis of

3354

landing response in 1361

moulting hormones in

analysis of 753

developmental changes in 667

effects on protein and nucleic acid

synthesis of 3354

movement detection system in 1361

muscles in, hormonal regulation of

metamorphosis of 2180

*Naja mossambica* venom in, toxicity of

200

neurosecretory system in 887

**Calliphora vicina contd.**

on sheep, in Australia 164

parasitised by

*Aclista alticolis*, in Romania 453

*Nasonia vitripennis* 2461

polar granules in 462

pole cells in 462

proteins in, developmental changes in

1916

rectum in, recycling of electrolytes in

2175

salivary glands in 2477

sex ratio in 1599

sex-related differences in 1599

vitellins in, properties of 2704

vitellogenins in, properties of 2704

**Calliphora vomitoria**

courtship in 2717

in USA 1346

mating in 2717

**Calliphoridae**

book 322

in Azerbaijan 899

in Liaoning 214

in Missouri 1346

in New Caledonia 3339

in Nigeria 2003

in Thailand 662

in *Agelaius phoeniceus* nests, in Manitoba

864

preyed on by, *Crabro advena* 1923

**Calliphorin**, in *Calliphora vicina*,

developmental changes in 1916

**Calliphorinae**, in Thailand 662**Callistopsyllus**, taxonomy of 1750**Callitroga macellaria** (see *Cochliomyia*

*macellaria*)

**Callopsylla caspia**

in USSR 355

on field voles, in Caucasus 355

population dynamics of 355

*Yersinia pestis* in, in Caucasus 355

**Callopsylla kazbegiensis**

sp. nov., description of 816

in USSR 816

on *Apodemus sylvaticus*, in Georgia

(USSR) 816

**Callosciurus erythraeus, Enderleinellus**

*corrugatus* on, in China 558

**Callus**, insect moulting hormone production

in 3130

**Caloglyphus berlesaei**

pleomorphic males of

pheromone suppressing production of

2481

selective advantage of 2482

**Caluromys**, yellow fever, virus in, in Brazil

2627

**calvescens, Laelaps****calvus, Chrysops****Calyptra eustrigata**

feeding behaviour in 916

in South-East Asia 1632

mouthparts in 916

**Camel** (*Camelus bactrianus* and *C.*

*dromedarius*)

*Cephalopina titillatrix* on

distribution pattern of 3332

in Mongolia 1996

*Haematopinus tuberculatus* on, effects on

blood of 1175

Ixodidae on

in Egypt 2752

in Iran 2211

Oestroidea on, book 2691

pest control on, acaricides for 3093

*Rhipicephalus pulchellus* on, in Somalia

251

*Sarcoptes scabiei* on, in Haryana 3093

*Trypanosoma evansi* in

in Chad 1303

in Ethiopia 1306

**camelina, Hippobosca****Camelus bactrianus** (see Camel)**Camelus dromedarius** (see Camel)**cameroni, Spalangia**

- campestris*, *Aedes*  
*campestris*, *Hyposophthalmus*  
*campestris*, *Lycotocoris*  
*Camphochlor* (see *Toxaphene*)  
*Camphor* (see *Bicyclo[2.2.1]heptan-2-one*, 1,7,7-trimethyl-)  
*Camponotus*, mimicked by *Myrmarchne platypalpus* 793  
*Camponotus abdominalis*, preying on, *Tityus serrulatus* 3433  
**Canada** (see also individual Provinces and Territories)  
 acarologists in, directory 2269  
 Culicidae in, book 1533  
 entomological research in 2510  
 entomologists in, directory 2269  
 entomology in, book 2539  
 insect fauna of, effects of human settlement on 2000  
 insect pests in 782  
*canadensis*, *Aedes*  
*canariense*, *Simulium* (see *S. pseudoequinum*)  
*canariensis*, *Pseudolynchia*  
*Canary* (*Serinus canarius*)  
*Sternostoma tracheacolum* on  
 diagnosis of 1413  
 in UK 2759  
**Canary Islands**  
 Culicidae in 2071, 2941  
 Muscidae in 1374  
*Candida albicans*, in, man, hypersensitivity to 3108  
*candidiensis*, *Anopheles jeyporiensis* (see *A. jeyporiensis*)  
*canestrinii*, *Ornithodoros*  
*canicularis*, *Fannia*  
*caniculi*, *Notoedres*  
*canis*, *Ctenocephalides*  
*canis*, *Demodex*  
*Canis familiaris* (see *Dog*)  
*Canis latrans*  
*Amblyomma americanum* on, in Oklahoma 2465  
*Malassezia pachydermatis* in, in New York State 2240  
*Sarcoptes scabiei* on, in New York State 2240  
*canis*, *Sarcoptes scabiei* (see *S. scabiei*)  
*canis*, *Trichodectes*  
*cantans*, *Aedes*  
*cantator*, *Aedes*  
*Cantharidin*  
 in horse, diagnosis of poisoning by 230  
 in sheep, diagnosis of poisoning by 230  
*Canthaxanthin* (see  $\beta,\beta$ -Carotene-4,4'-dione)  
*Caparinia algeris*  
 sp. nov., description of 284  
 in Spain 284  
 on *Aethechinus algeris*, in Spain 284  
*Caparinia erinacei*  
 in Kenya 2239  
 on *Erinaceus albiventris*, in Kenya 2239  
*capensis*, *Fucellia*  
*capensis*, *Ornithodoros*  
*capillatus*, *Solenopotes*  
*capitis*, *Pediculus*  
*caponis*, *Lipeurus*  
*Capra hircus* (see *Goat*)  
*caprae*, *Demodex*  
*caprae*, *Sarcoptes scabiei* (see *S. scabiei*)  
*Capreolus capreolus*  
 arthropod pests of, in German Democratic Republic 1721  
*Cephenemyia stimulator* on, in Italy 10  
*Hybomitra turkestanica* on, in Ukraine 1024  
*caprilesi*, *Culicoides*  
*Caproic acid* (see *Hexanoic acid*)  
*Capromylichus*, descriptions of 1952  
*Capromylichus cubanus*  
 descriptions of 1952  
 on *Capromys auritus* 1952  
 on *Capromys prehensilis* 1952  
*Capromys auritus*, *Capromylichus cubanus* on 1952  
*Capromys melanurus*, *Cubanochirus elongatus* on 1952  
*Capromys prehensilis*  
*Capromylichus cubanus* on 1952  
*Cubanochirus elongatus* on 1952  
**Carabidae**  
 helminths in 489  
 in Uzbekistan 316  
**Carabidae** *contd.*  
 preyed on by, *Loxosceles reclusa*, in Iowa 3430  
**Carbamic acid**, (5-benzoyl-1H-benzimidazol-2-yl)-, methyl ester (see *Mebendazole*)  
**Carbamic acid**, dimethyl-  
 2-(diethylamino)-4-nitrophenyl ester  
 insecticidal activity of 2507  
 synthesis of 2507  
**Carbamic acid**, ethyl-, 3-[(3,7-dimethyl-7-methoxy-2-octenyl)oxy]phenyl ester, (E)-, in *Musca domestica*, inhibition of juvenile hormone esterase by 2795  
**Carbamic acid**, [2-(4-phenoxyphenoxy)ethyl]-, ethyl ester, against, *Culex pipiens*, in ponds 3436  
**Carbaryl** (1-naphthalenyl methylcarbamate) against  
*Amblyomma americanum* 3059  
*Culex quinquefasciatus* 3269  
*Euproctis chrysorrhoea* 3377  
*Goniocotes gallinae*, on poultry 32  
*Menopon gallinae*, on poultry 32  
*Musca domestica* 528  
*Ornithodoros lahorensis* 3410  
*O. savignyi* 2837  
*Ornithonyssus sylviarum*  
 on fowl 2764  
 on poultry 290  
*Pediculus capitis* 345  
 on man 347  
*Sarcoptes scabiei*, on camel 3093  
 in Calliphoridae, relation of microsomal oxidase and tolerance to 2712  
 in *Musca domestica*, inducing mixed function oxidase 909  
 in *Periplaneta americana*, effects of antibiotics on toxicity of 2505  
 in poultry, toxicity of 32  
 on building materials, persistence of 203  
 resistance to, in  
*Boophilus microplus*, in South Africa 939  
*Ornithonyssus sylviarum*, in Israel 290  
 synergists for, piperonyl butoxide as 2712  
**Carbidopa** ((S)- $\alpha$ -hydrazino-3,4-dihydroxy- $\alpha$ -methylbenzenepropanoic acid) against, *Lucilia cuprina* 1382  
**Carbinol**, dimethyl- (see 2-Propanol)  
**Carbofuran** (2,3-dihydro-2,2-dimethyl-7-benzofuranyl methylcarbamate)  
*N*-phenylsulfonyl derivatives of,  
 insecticidal activity of 2265  
**Carbohydrates**  
 in *Aedes aegypti* Malpighian tubules, not affected by *Dirofilaria repens* 101  
 in *Culex pipiens* hemolymph, effects of *Romanomermis culicivora* on 1229  
 in *Heterometrus scaber* venom 3434  
 in insect diets, requirements for 2834  
 in *Musca domestica* larvae, effects of diet on 1364  
**Carbon dioxide**  
*Amblyomma americanum* responses to 604  
*A. maculatum* responses to 604  
 attractant for  
*Coquillettidia perturbans* 2614  
*Culex salinarius* 3292  
 Culicidae 1790, 2060  
*Culicoides* spp. 1842  
*C. occidentalis* 2385  
*Glossina* spp. 1881, 1997  
 Muscidae 1881  
 Stomoxysinae 1881  
 Tabanidae 1881, 3015  
*Dermacentor variabilis* responses to 604  
*Haemaphysalis longicornis* responses to 2462  
 in Culicidae  
 effects of California encephalitis virus on susceptibility to 615  
 role in host-seeking of, review 1792  
 in *Musca domestica*, effects on mating of 2188  
 in *Periplaneta americana*, effects on insecticide susceptibility of 2848  
**carbonarius**, *Chrysops*  
**Carbonate**, hydrogen, in *Simulium* breeding water 2666  
**Carbophenothion** (S-[[[4-(chlorophenyl)thio]methyl] O,O-diethyl phosphorodithioate) against  
*Amblyomma* spp. 703  
*Lucilia cuprina*, on sheep 169  
 resistance to, in, *Boophilus microplus*, in South Africa 939  
**Carbophos** (see *Malathion*)  
**Carboxypeptidase A**  
 in *Haematobia irritans* gut 3369  
 in *Stomoxys calcitrans* gut 3369  
 in *Stomoxys calcitrans* salivary glands 3369  
**Carboxypeptidase B**, in *Haematobia irritans* gut 3369  
**Carboxypeptidase**, dipeptidyl, in rat lung, inhibited by scorpion venom 2499  
**Carcinops pumilio**  
 control of, insecticides for 486  
 in UK 486  
 in USA 226  
 in dwellings, in England 486  
 in poultry dung  
 in England 486  
 in North Carolina 226  
**Carcinus mediterraneus**  
 in France 69  
 insect growth regulators in, effects of 69  
**Carex aquatilis**, Culicidae associated with, in Quebec 2958  
**Carex rostrata**, Culicidae associated with, in Quebec 2958  
**Caridina africana**  
 deltamethrin in, toxicity of 2982  
 in Upper Volta 2982  
**carinata**, *Silpha*  
**Carnivora**  
 arboviruses in, in Spain 2233  
 Phlebotominae on, in Panama 2150  
 Trombiculidae on, in Indiana 1966  
**Carnus hemapterus**  
 in USSR 1021  
 on birds, in USSR 1021  
**Carollia perspicillata**  
*Ophthalmodex carolliae* on, in Suriname 1002  
*Pterodex carolliae* on, in Suriname 1001  
*carolliae*, *Ophthalmodex*  
*carolliae*, *Pterodex*  
 $\beta,\beta$ -Carotene-3,3'-diol  
 (3R,3'R)-  
 in *Dermanyssus gallinae* 800  
 in *Menopon gallinae* 800  
 $\beta,\beta$ -Carotene-3,3'-diol, 5,8-epoxy-5,8-dihydro-  
 in *Dermanyssus gallinae* 800  
 in *Menopon gallinae* 800  
 $\beta,\epsilon$ -Carotene-3,3'-diol, 5,6-epoxy-5,6-dihydro-  
 in *Dermanyssus gallinae*, and in fowl 800  
 in *Menopon gallinae*, and in fowl 800  
 $\beta,\beta$ -Carotene-4,4'-dione, in fowl, not found in lice 800  
 $\beta,\beta$ -Carotene-4,4'-dione, 3,3'-dihydroxy-, (3S,3'S)-, in fowl, not found in lice 800  
 $\beta,\beta$ -Carotene (see  $\beta,\beta$ -Carotene)  
 $\beta,\beta$ -Carotene  
 in *Dermanyssus gallinae*, and in fowl 800  
 in *Menopon gallinae*, and in fowl 800  
 $\beta,\beta$ -Caroten-3-ol  
 (3R)-  
 in *Dermanyssus gallinae*, and in fowl 800  
 in *Menopon gallinae*, and in fowl 800  
**Carpets**, permethrin in, persistence of 2516  
**Carpoglyphus lactis**  
 aggregation in, caused by *Lardoglyphus konoi* pheromone 3424  
 alarm pheromone in 1652  
 antigens of 3097  
 biology of 516  
 descriptions of 516  
 in China 516  
**Carrión**, Diptera in, breeding seasons of 3364  
**Carrot** (*Daucus carota*)  
*Periplaneta americana* on, feeding by 28  
**Carvotanacetone** (see 2-Cyclohexen-1-one, 2-methyl-5-(1-methylethyl)-)  
**Carylderm** (see *Carbaryl*)



## Subject Index

*casei*, *Phophila*  
*casei*, *Tyrollichus*  
*caspia*, *Callopsylla* (*Ceratophyllus*)  
*caspius*, *Aedes*  
*caspius*, *Ceratophyllus* (see *Callopsylla caspia*)  
Cassava (*Manihot esculenta*)  
Cassava fermentation pools, Culicinae in, in Nigeria 602  
*casta*, *Rhadinopsylla integella* (see *R. integella*)  
*castaneum*, *Tribolium*  
Castor (*Ricinus communis*)  
Castor oil, bait component for, *Musca domestica* 3018  
Cat (*Felis domestica*)  
*Cheyletiella* spp. on  
in Connecticut 1965  
in Japan 983  
*C. blakei* on  
in Austria 515  
in Japan 288  
transfer to man of 1414  
*Ctenocephalides felis* on  
hypersensitivity to 363  
in England 2872  
in Jordan 365  
*Culex pipiens* on, in Honshu 2908  
*Demodex* spp. on, in Western Australia 3104  
*D. cati* on, in Massachusetts 279  
ectoparasites of, transfer to man of 365, 1417  
*Felicola subrostratus* on, in Hungary 2012  
flea collars for, problems caused by 2026  
flea control on, insecticides for 2325  
human hypersensitivity to 1654  
*Ixodes hexagonus* on, in Italy 3064  
*I. ricinus* on, in Italy 3064  
*Lucilia sericata* on, in Missouri 1346  
*Mesobuthus eupeus* venom in, effects on blood circulation of 307  
*Notoedres cati* on 2837  
in Indonesia 2806  
*Otodectes cynotis* on, hypersensitivity to 296  
Phthiraptera on, in Afrotropical region, book 1177  
*Trypanosoma cruzi* in, in Chile 3176  
*Cataglyphis aeneascens*  
*Dicrocoelium dendriticum* in, in Kirgizia 3053  
in USSR 3053  
Catalase, in *Aldrichina grahami* microbodies 3366  
*Catallagia charlottensis*  
in USA 2586  
on *Microtus canicaudus*, in Oregon 2586  
*Catallagia dacenkoi*  
in USSR 2871, 3184  
on small mammals  
in Siberia 3184  
in USSR 2871  
*Catallagia ioffi*  
in USSR 3184  
on small mammals, in Siberia 3184  
*Catallagia sculleni*  
in USA 2319  
*Yersinia pestis* in, in California 2319  
*cataneii*, *Culicoides*  
*cataphylla*, *Aedes*  
Catch basins  
*Culex pipiens* in, in Indiana 1791  
*C. quinquefasciatus* in, sampling of 2116  
Culicidae in, in California 2088  
mosquito control in  
*Bacillus sphaericus* for 2088  
*B. thuringiensis* for 2088  
Catering establishments, *Blatta orientalis* in, in UK 3157  
*Catharsius pithecius*, dung burial by 1931  
Cathepsin C, in *Calliphora vicina*  
hemolymph, activity pattern of 882  
*cati*, *Demodex*  
*cati*, *Notoedres*  
Cattle (*Bos taurus*)  
*Acarus siro* in feed of, effects of 1662  
*Aedes* spp. on, in Czechoslovakia 3230  
Akabane virus in, in Queensland 866  
*Amblyomma americanum* on  
development of 1936  
fecundity of 1936

## Cattle contd.

*Amblyomma americanum* on contd.  
rearing of 2467  
*A. cajennense* on  
distribution pattern of 1126  
in Mexico 1460  
*A. hebraeum* on, in South Africa 945  
*A. variegatum* on 3060  
in Central African Republic 1411  
in Kenya 1641  
in Nigeria 1108, 3415  
amitraz in, residues of 696  
*Anaplasma* spp. in, in Costa Rica 3393  
*A. marginale* in  
in Colombia 236  
in Queensland 949  
in South Africa 950  
in Spain 3078  
in USA 943  
*Anocentor nitens* on, in Colombia 2218  
*Anopheles franciscanus* on, in California 2083  
*A. sinensis* on, in Honshu 2907  
arboviruses in, surveillance for 866  
*Arcyophora* spp. on, in Zimbabwe 1632  
arthropod pests of  
in Nigeria 245  
in Queensland 16  
in Wyoming 2525  
*Babesia* spp. in, in Costa Rica 3393  
*B. bigemina* in  
effects of diminazene aceturate on 1069  
immunity to, specificity of 2221  
in Australia 947  
in Colombia 236  
in South Africa 948  
*B. bovis* in  
immunity to, specificity of 2221  
in Australia 947  
in Colombia 236  
in Mexico 1640  
in South Africa 948  
*B. colchica* in, effects of diminazene aceturate on 1069  
*B. divergens* in  
immunization against 946  
in Irish Republic 1635  
in Northern Ireland 2212  
blood-sucking flies on  
effects on growth rate of 1521  
effects on milk production of 1521  
bluetongue virus in  
in Australia 866  
in Western Australia 2142  
*Boophilus* spp. on  
in Costa Rica 3393  
in South Africa 2224  
*B. annulatus* on  
in Egypt 3394  
in French Polynesia 1943  
*B. decoloratus* on, in South Africa 948  
*B. microplus* on  
antienzymes to 2217  
diseases transmitted by 2836  
distribution pattern of 1126  
eosinophils transporting histamine to attachment sites of 2471  
hyperemia caused by 3073  
immunity to, effects of *Babesia* on 1938  
in Andaman and Nicobar Islands 2746  
in Colombia 700, 2218  
in Jamaica 2463  
in Mexico 1124, 1460, 1640  
in New Caledonia 3068  
in New Hebrides 3061  
in Queensland 259, 260  
in South Africa 948  
resistance to 2476  
dermal vasculature and 3072  
role of histamine in 1395  
seasonal variation in 959  
transfer from herbage of 964  
Ceratopogonidae on, in Alberta 1287  
*Chlamydia* spp. in  
in California 267  
tick transmission of 267  
*Choriotptes bovis* on  
diagnosis of 2761  
in Indonesia 2806

## Cattle contd.

*Corynebacterium pyogenes* in, in Netherlands 890  
*Cowdria ruminantium* in  
immunization against 945  
in Mauritius 958  
*Culex pipiens* on, in Honshu 2908  
Culicidae on, in Alberta 1287  
*Culicoides* spp. on  
in Kenya 1551  
in New York State 417  
*C. marksii* on, diseases transmitted by 2836  
*C. venustus* on, in New York State 2965  
*Damalinia bovis* on  
distribution pattern of 2291  
in New Zealand 2290  
in Ontario 1742  
*Demodex* spp. on  
effects of 521  
in Nigeria 521  
Diptera on  
in France 223  
in German Federal Republic 465  
in Ukraine 1024  
Douglas virus in, in Queensland 862  
ectoparasites of, in Philippines 2813  
*Ehrlichia phagocytophila* in, in Northern Ireland 946, 2212  
famphur in, cholinesterase inhibition by 3329  
famphur on, poisoning of birds by 3009  
fenthion in  
residues of 1590  
toxicity of 1590  
fly control on 465, 1270  
insecticide-impregnated ear tags for 1367, 2422, 2430, 3010  
insecticide-impregnated PVC strips for 441  
insecticides for 203, 223, 1289, 1362, 2820  
pyrethroids for 2446  
repellents for 1288, 3230  
self-application devices for 1915  
shelters for 1289  
*Glossina* spp. on, in Gambia 1299  
*G. morsitans* on  
attraction of 2997  
in Gambia 1298, 1305  
*G. pallidipes* on  
attraction of 2997  
rearing of 1316  
*G. palpalis* on, in Gambia 1298, 1305  
*Haemaphysalis longicornis* on  
in Honshu 3085  
in New South Wales 3079  
*H. punctata* on, in Wales 3086  
*Haematobia irritans* on  
effects on growth rate of 470, 2422  
in Georgia (USA) 1367  
in Kentucky 2430  
in Ontario 1915  
in Texas 3010  
*Haematopinus eurytarnus* on, in Ontario 1742  
*Hippobosca* spp. on, in Timor 2820  
*Hyalomma anatolicum* on  
in Egypt 3394  
in Iran 2211  
*H. detritum* on, in Punjab 962  
*H. dromedarii* on, in Egypt 3394  
*H. truncatum* on, sweating sickness caused by 246  
*Hydrotaea irritans* on  
in Netherlands 890  
in UK 3048  
*Hypoderma* spp. on  
effects on growth rate of 3329  
in Hungary 878  
in USSR 3330  
*H. bovis* on  
antibodies to 1889  
diagnosis of 652  
immunity to 440  
in Czechoslovakia 2690  
in UK 653  
in USSR 1590, 1591, 2689  
*H. lineatum* on  
antibodies to 1889  
diagnosis of 652  
in Indiana 2407  
in Texas 441

**Cattle contd.**

- Hypoderma lineatum* on contd.  
in UK 653  
in USSR 2689
- Ixodes ricinus* on  
in Irish Republic 1635  
in Northern Ireland 946, 2212  
in USSR 253
- Ixodidae on  
in Egypt 2752  
in Karnataka 1401
- Ixodoidea on  
immunity to, review 952  
in developing countries 714  
in Europe 1948  
in India 2837  
in South Africa 1645  
in Timor 2820  
in tropics 1649  
in Zimbabwe 937
- Linognathus vituli* on  
distribution pattern of 2291  
effects of 2015  
in New Zealand 2290  
in Ontario 1742
- louse control on 2853
- Moraxella bovis* in, flies increasing susceptibility to 2200
- Musca autumnalis* on  
in Kentucky 2430  
in Ontario 1915
- Muscidae on, in Japan 1379
- Oestroidea on, book 2691
- Onchocerca gibsoni* in, fly transmission of 2654
- O. gutturosa* in  
distribution pattern of 128  
in Sudan 1841
- O. lienalis* in, distribution pattern of 128
- Peaton virus in, in New South Wales 862, 1253
- pest control on 2525  
pyrethrins for 1087
- phenothiazine in, toxicity of 1012
- Phlebotomus chinensis* on, in China 868
- Phthiraptera on, in Afrotropical region, book 1177
- Psoroptes ovis* on, effects of grooming on 3427
- Railletia auris* on  
in Mexico 1128  
in Queensland 3102
- Rhipicephalus* spp. on, in Kenya 1641
- R. appendiculatus* on  
immunity to 1939  
in Kenya 3089
- R. bursa* on, in Spain 3078
- R. sanguineus* on, in French Polynesia 1943
- Sarcoptes scabiei* on  
in Scotland 2761  
transfer to man of 2761
- Simuliidae on  
effects of 1290  
in Alberta 1288, 1289
- Simulium* spp. on, in Alberta 1286, 1287
- S. nigrum* on, in USSR 2973
- S. ornatum* on, distribution pattern of 128
- Stephanofilaria assamensis* in, in Uzbekistan 1891
- Stomoxys* spp. on, in Timor 2820
- S. calcitrans* on  
effects on milk production of 1131  
in UK 3048
- Strobilostrus* spp. on, in South Africa 1341
- Suctarsonemus* spp. on, in Mexico 1462
- Suidasia pontifica* on, in Mexico 1462
- Tabanidae on  
blood-feeding by 1899  
distribution pattern of 1899  
feeding by 2443  
in Alberta 1287  
in Connecticut 1921  
in Oklahoma 3015  
in Tadzhikistan 205  
in Ukraine 1078  
in USSR 1376
- Tabanus* spp. on, in Czechoslovakia 3230
- tetrachlorvinphos in  
excretion of 1451  
metabolism of 1451

**Cattle contd.**

- Theileria* spp. in  
and in wild bovids 1722  
in Africa 936  
in southern Africa 942  
in Spain 3078
- T. annulata* in, immunization against 944
- Tibrogargan virus in, antibodies to 3303
- tick-borne diseases of  
as barrier to efficient land use 1642  
control of 2224  
in Europe 1948  
in tropics 1649
- tick control on 258, 259, 260, 714, 1649, 2224
- acaricides for 975, 1888, 2737
- economics of 1924
- pyrethroids for 756
- Trypanosoma* spp. in  
and in wild animals 1879  
fly transmission of 1868  
in Chad 1303  
in Ethiopia 1306  
in Gambia 1298, 1299, 1305  
in Mozambique 1307  
in Niger 1302  
in Senegal 1301  
tolerance of 3327, 3328
- T. congolense* in, tsetse transmission of 1870
- T. vivax* in, in Senegal 1300
- Cattle blood**  
diet component for  
*Anopheles albimanus* 3236  
*Glossina palpalis* 1104, 1105  
in *Glossina morsitans* diet, uptake from mid-gut of 1092
- Cattle dips**, chlorfenvinphos in, determination of 235
- Cattle dung**  
*Aleochara moesta* in 3344  
*Amitermes wheeleri* in, in New Mexico 2729
- Anoplocephala* spp. in, beetle transmission of 686
- Aphodius* spp. in, immigration and emigration of 1383
- Catharsius pithecius* in, burial by 1931
- Cercyon* spp. in, immigration and emigration of 1383
- Coleoptera in  
in Morocco 3386  
successions of 490
- Copris siangensis* in, in Arunachal Pradesh 2724
- coprophagous beetles in, movement patterns of 3050
- Diptera in  
in Bulgaria 902  
in German Federal Republic 465  
in Yugoslavia 901
- Dryomyza anilis* in 2183
- fly control in  
biological 209  
insect growth regulators for 2436  
insecticides for 477, 2433
- Gnathamitermes tubiformans* in, in New Mexico 2729
- Haematobia irritans* in  
effects of moisture on 1903  
effects of nitrogen content on 2424  
effects on ammonia loss of 2425  
in Georgia (USA) 2699  
in USA 1932
- Hydrophilidae in, attraction of 225
- Musca autumnalis* in 454  
effects of cattle diet on 2441  
effects of competition on 1598  
effects of dung beetles on 2442  
in USA 1932
- M. vetustissima* in, effects of rainfall on 1353
- Onthophagus gazellus* in  
effects on ammonia loss of 2425  
for control of cattle parasites 1932  
for fly control 1932
- O. granulatus* in, in Australia 2728
- O. subansiriensis* in, in Arunachal Pradesh 1629
- Scarabaeidae in  
in Morocco 3385  
population ecology of 1385

**Cattle dung contd.**

- Scathophaga stercoraria* in  
in Michigan 2454  
in UK 1927  
movement patterns of 3050
- Sepsis albopunctata* in, in Andhra Pradesh 1914
- S. nitens* in, in Andhra Pradesh 1914
- Staphylinidae in, in USSR 1057
- Cattle-dung fertilizer**, arthropod fauna of, in Irish Republic 324
- Cattle farming**, Ixodidae as affected by 3411
- Cattle farms**  
Diptera in, in Bulgaria 902  
fly control in  
baits for 3018  
insecticides for 477
- Musca domestica* in  
in Delhi 3018  
in Egypt 477  
in Florida 367
- M. sorbens* in, in Egypt 477
- Stomoxys calcitrans* in  
in Florida 367  
in USA 904
- synanthropic flies in, in USSR 1040
- Cattle feed**, *Acarus siro* in, effects of 1662
- Cattle housing**  
*Anopheles* spp. in, in Ukraine 1075  
*A. albimanus* in, in El Salvador 3243  
*A. culicifacies* in, in Rajasthan 609  
*Culex* spp. in, in Bangladesh 1562
- Diptera in  
in Bulgaria 902  
in Yugoslavia 901
- fly control in, insecticide-treated glassfibre strips for 455
- mosquito control in, insecticides for 1827
- Musca domestica* in  
in Florida 455  
in German Federal Republic 1356
- Phlebotominae in, in Bihar 1262
- Phlebotomus argentipes* in  
in Bihar 1260  
in Gujarat 2662
- P. papatasi* in, in Gujarat 2662
- P. perniciosus* in, in Italy 764
- Cattle milk**  
amitraz in, residues of 696  
fenthion in, residues of 1590  
naled in, uptake from air of 2266
- Cattle odour**  
attractant for, *Glossina* spp. 1881, 1882, 1883  
*Glossina morsitans* responses to 152  
*G. pallidipes* responses to 152
- Cattle pastures**  
*Bubas* spp. in, in France 2207  
insect traps for use in 2699
- Cattle serum**, fetal  
culture-medium component for  
*Boophilus microplus* cell lines 2226  
*Trypanosoma brucei* 149  
*T. congolense* 2162
- Cattle, zebu** (see Zebu)
- caucasicum**, *Hyalomma asiaticum*
- Caves, *Phlebotomus chinensis* in, in China 868
- Cavia cobaya* (see Guinea-pig)
- caviae**, *Trixacarus*
- cavipalpus**, *Ixodes*
- Cayman Islands  
*Culicoides barbosai* in 626  
*C. furens* in 626
- Cebus**, yellow fever, virus in, in Brazil 2627
- Cediopsylla**, on *Sylvilagus* 2335
- Cediopsylla simplex**  
in USA 1155, 3145  
on *Sylvilagus floridanus*  
in Indiana 3145  
in USA 1155
- celebensis**, *Farhangia* (*Pygiopsylla*)
- celebensis**, *Pygiopsylla* (see *Farhangia celebensis*)
- Cell lines**  
*Aedes aegypti*  
Getah virus in, replication of 89  
Newcastle disease virus in, infectivity of 2817  
West Nile virus in, replication of 89



Cell lines *contd.*

- Aedes aegypti* *contd.*  
yellow fever virus in, replication of 2637
- A. albopictus*  
arboviruses in, isolating of 2950, 3286  
changes in 3287  
characteristics of 1526  
chikungunya virus in, mutants of 836  
culture methods for 1997  
dengue virus in, infectivity of 1526  
Getah virus in, replication of 89  
incorporation of labelled metabolites into 1568  
Inkoo virus in, persistent infection with 1839  
Japanese encephalitis virus in, isolating of 2032  
Newcastle disease virus in, infectivity of 2817  
pH variation in 1566  
Ross River virus in, persistent infection with 582  
Semliki Forest virus in  
cell fusion caused by 114  
effects of pH on 1567  
pathogenicity of 1569  
persistent infection with 582, 2639  
replication of 2376, 2639  
subviral particles from 113  
Sindbis virus in  
defective-interfering particles of 835  
factor antagonistic to 1838  
interference in 2961  
persistence of 2961  
Uukuniemi virus in, persistent infection with 1839  
vesicular stomatitis virus in  
defective interfering particles of 1834  
replication of 1835  
West Nile virus in  
infectivity of 1526  
replication of 89
- A. pseudocutellaris*  
Getah virus in, replication of 89  
incorporation of labelled metabolites into 1568  
pH variation in 1566  
Semliki Forest virus in, effects of pH on 1567  
West Nile virus in, replication of 89
- Boettcherisca peregrina* 886  
*Boophilus microplus* 2226, 3412  
*Culex quinquefasciatus*, arboviruses in, infectivity of 1524  
Culicidae  
review 1468  
yellow fever virus in, replication of 2348  
*Glossina morsitans* 1470  
*Heliothis zea*, *Nosema algerae* in, replication of 112  
Ixodidae, review 1469  
*Mamestra brassicae*, *Nosema algerae* in, replication of 112  
mammals, Baculoviridae in, no effects from 1034  
*Rhipicephalus appendiculatus*, *Theileria parva* in, culturing of 1940  
*Simulium* spp., nematode culture in 2381  
*Toxorhynchites amboinensis*, arboviruses in, infectivity of 589  
*Trichoplusia ni*, *Nosema algerae* in, replication of 112
- Cellia**  
chromosomes in, nomenclature of 1545  
taxonomy of 2904
- Cellulase**  
in *Eublaberus posticus* gut 1161  
in *Periplaneta americana* gut 1161  
role of salivary glands in maintenance of 2551
- Cellulose**  
carboxymethyl ether  
in *Eublaberus posticus*, bacterial digestion of 1161  
in *Periplaneta americana*, bacterial digestion of 1161
- celsus, Ceratophyllus**
- Cement**, insecticides on, persistence of 203
- Cemeteries**, *Aedes aegypti* in, in Puerto Rico 3247

## Cemetery vases

- Aedes aegypti* in, in Venezuela 2643  
*Culex corniger* in, in Venezuela 2643  
*C. quinquefasciatus* in  
in California 2916  
in Venezuela 2643  
sampling of 2116  
*Culiseta incidens* in, in California 2916
- Central African Republic**  
*Aedes africanus* in, viruses in 2066, 3295  
*A. opok* in, viruses in 2066, 3295  
*Amblyomma variegatum* in, viruses in 1411
- centralis, Glossina morsitans**
- Centruroides**  
development in 3432  
in Argentina 1477  
in Cuba 3432  
oviposition in 3432
- Centruroides gracilis**  
development in 3432  
in Cuba 3432  
oviposition in 3432
- Centruroides limpidus tecomanus**  
enzymes in 522  
venom of 522
- Centruroides noxius**, venom of 2781
- Centruroides sculpturatus**  
control of, pesticides for 2495  
in USA, introductions of 2495  
in dwellings, in California 2495  
venom of 2499, 3114
- Cephalopina titillatrix**  
in Mongolia 1996  
in USSR 3332  
on camel  
distribution pattern of 3332  
in Mongolia 1996  
seasonal abundance of 3332
- Cephalosporium**, in, Culicidae, in Ukraine 1025, 1757
- Cephenemyia stimulator**  
in German Democratic Republic 1721  
in Italy 10  
on *Capreolus capreolus*, in Italy 10  
on deer, in German Democratic Republic 1721
- Cephenemyia trompe**  
control of, insecticides for 3008  
in Finland 3008  
on reindeer, in Finland 3008
- Ceratophyllus**  
in Alaska 2330  
tracheoles in 2835
- Ceratophyllus adustus**  
in USA (Alaska) 1187  
in *Picoides tridactylus* nests, in Alaska 1187
- Ceratophyllus advenarius** (see *Megabothris advenarius*)
- Ceratophyllus calcarifer** (see *Megabothris calcarifer*)
- Ceratophyllus caspius** (see *Callopsylla caspia*)
- Ceratophyllus celsus**  
in USA (Alaska) 2303  
in *Riparia riparia* nests, in Alaska 2303
- Ceratophyllus consimilis** (see *Nosopsyllus consimilis*)
- Ceratophyllus diffinis**  
in USA (Alaska) 1187  
on *Ixoreus naevius*, in Alaska 1187
- Ceratophyllus fasciatus** (see *Nosopsyllus fasciatus*)
- Ceratophyllus gallinae**  
biology of 820  
control of 820  
destroying breeding sites for 2341  
insecticides for 2341, 2564  
in New Zealand 2312  
in Poland 2564  
in UK 1139, 2341  
in USA (Alaska) 1187  
on *Dendroica coronata*, in Alaska 1187  
on fowl, in Poland 2564  
on man  
in central Europe 820  
in Scotland 2341
- Ceratophyllus garei**  
in Canada 864  
in USSR 1049, 3184  
in *Agelaius phoeniceus* nests, in Manitoba 864

Ceratophyllus garei *contd.*

- on *Agelaius phoeniceus*, in North America 4  
on *Clethrionomys glareolus*, in USSR 1049  
on small mammals, in Siberia 3184
- Ceratophyllus hirundinis**, taxonomy of, characters distinguishing *C. nanshanensis* and 819
- Ceratophyllus laeviceps** (see *Nosopsyllus laeviceps*)
- Ceratophyllus lebedewi**  
in USSR 1688  
*Yersinia pestis* in, in Kirgizia 1688
- Ceratophyllus mokrzecky**  
in USSR 1060  
on *Mus musculus*, in Crimea 1060
- Ceratophyllus nanshanensis**  
sp. nov., description of 819  
in China 819  
on *Hirundo daurica*, in Chinghai 819  
on *Ptyonoprogne rupestris*, in Chinghai 819
- Ceratophyllus penicilliger** (see *Amalareus penicilliger*)
- Ceratophyllus rectangulatus** (see *Megabothris rectangulatus*)
- Ceratophyllus sciurorum**  
antennae in, chemoreceptors on 358  
maxillary palps in, chemoreceptors on 358  
mid-gut in 45  
olfactory system in, evolution of 3132
- Ceratophyllus styx riparius**  
in USA (Alaska) 2303  
in *Riparia riparia* nests, in Alaska 2303
- Ceratophyllus tesquorum** (see *Citellophilus tesquorum*)
- Ceratophyllus turbidus** (see *Megabothris turbidus*)
- Ceratopogonidae**  
*Bacillus thuringiensis* in, pathogenicity of 2086  
conference on 127  
*Culicinomyces clavosporus* in, pathogenicity of 1829  
in Auckland Islands 1252  
in Campbell Island 1252  
in Kenya 1551  
in Nearctic region, book 2587  
in Nigeria 2003  
in South Africa 1248  
in Ukraine 1024, 1079  
insecticides in, determining of susceptibility to 3190  
on cattle  
effects on productivity of 1521  
in Alberta 1287  
pathogens of, bibliography 2517  
physiological age of, determining of 2874  
research on, requirements for 2822  
traps for 97
- Ceratozetella minimus** (see *Ceratozetes minimus*)
- Ceratozetella sellnicki**  
Anoplocephalata in, in USSR 1081  
in USSR 1081
- Ceratozetes gracilis**  
Anoplocephalata in, in USSR 1081  
in USSR 1081
- Ceratozetes incisellus**  
Anoplocephalata in, in USSR 1081  
in USSR 1081
- Ceratozetes mediocris**  
Anoplocephalata in, in USSR 1081  
in USSR 1081
- Ceratozetes minimus**  
Anoplocephalata in, in USSR 1081  
in USSR 1081
- Cercopithecus aethiops**, chikungunya virus in, in Central African Republic 2066
- Cercyon**  
in cattle dung  
immigration and emigration of 1383  
movement patterns of 3050
- Cercyon haemorrhoidalis**  
in UK 1383  
in cattle dung, immigration and emigration of 1383
- Cercyon impressus**  
attraction of, to cattle dung 225  
in Belgium 225  
in UK 1383

- Cercyon impressus** contd.  
in cattle dung, immigration and emigration of 1383
- Cercyon lateralis**  
attraction of, to cattle dung 225  
in Belgium 225
- Cercyon melanocephalus**  
attraction of, to cattle dung 225  
in Belgium 225
- Cercyon obsoletus**  
in UK 1383  
in cattle dung, immigration and emigration of 1383
- Cercyon pygmaeus**  
attraction of, to cattle dung 225  
in Belgium 225
- Ceriodaphnia**, in ponds, effects of insect growth regulators on 3024
- cervi**, *Lipoptena*
- Cervus**, *Hydrotaea irritans* on, in Irish Republic 2182
- Cervus elaphus**  
arthropod parasites of, in Spain 1117  
arthropod pests of, in German Democratic Republic 1721  
*Rhabdopidion longicornis* on, in New Zealand 1172  
*Solenopotes burmeisteri* on, in New Zealand 1172
- Cervus nippon**, *Haemaphysalis longicornis* on, in Maritime Territory 3411
- Cervus unicolor**, *Haematopinus longus* on, in China 1497
- Cess pits**  
*Chrysomya chloropyga* in, in Tanzania 2928  
*Culex quinquefasciatus* in, in Tanzania 2928  
fly control in, traps for 2928
- Cesspools**, *Culex quinquefasciatus* in, in Tamil Nadu 2600
- Cestoda** 1051, 1081, 1119  
*Anoplocephala* 686  
*Choanotaenia infundibulum* 316, 489  
*Hydatigera taeniaeformis* 1900  
*Hymenolepis diminuta* 366, 1390, 1391, 1625  
*H. nana* 1625  
*H. uncinata* 689  
*Moniezia* 738, 2517  
*M. expansa* 2837  
*Raillietina cesticillus* 489  
*Rodentolepis erinacei* 689  
*Taenia saginata* 123, 488
- Cestodes**, index-catalogue of 1119
- CGA-19255** (see 1,3,5-Triazine-2,4-diamine, 6-azido-N-cyclopropyl-N'-ethyl-)
- CGA-72662** (see 1,3,5-Triazine-2,4,6-triamine, N-cyclopropyl-)
- chabaudi**, *Phlebotomus*
- Chactidae**, in Mexico 1676
- Chad**  
*Glossina* spp. in 1303  
trypanosomiasis in 1303
- Chaetopsylla matina**  
genitalia in 1752  
in Czechoslovakia 1752  
in Poland 51, 1752  
on *Martes martes*, in Poland 51  
on *Vulpes vulpes*, in Czechoslovakia 1752
- Chaetopsylla wenxianensis**  
sp. nov., description of 361  
in China 361  
on *Mustela sibirica*, in China 361  
on *Rattus norvegicus*, in China 361
- Chagas' disease** (see also *Trypanosoma cruzi*)  
book 1504  
control of  
in rural areas 326  
vector control for 3173  
epidemiology of 3172  
human ecology and 38  
in Brazil 811  
in Chile 3176  
in French Guiana 1154  
palm trees and 2020  
review 3138
- Chagasia**, collections of, in Oswaldo Cruz Foundation, Brazil 1016
- Chagasia bonnae**  
gonotrophic cycle in 1769
- Chagasia bonnae** contd.  
in Brazil 1769  
on man, in Brazil 1769
- Chalinolobus gouldii**, *Calcaromyobia miniopteris* on, in Australia 301
- Chandlerella**  
taxonomy of  
characters distinguishing *Eufilaria* and 1573  
characters distinguishing *Splendidofilaria* and 1573
- Chandlerella chitwoodae**  
in  
*Culicoides stilobezzioides*, infectivity of 2651  
*C. trivisi*, infectivity of 2651
- Changuinola virus**, in, *Toxorhynchites amboinensis*, infectivity of 589
- Chaoboridae**  
*Bacillus thuringiensis* in, not pathogenic 3296  
distribution of 2427  
habitats of 2427  
parasitised by, *Arrenurus* spp., in West Germany 468
- Chaoborinae**, *Culicomyces clavosporus* in, pathogenicity of 1829
- Chaoborus**  
distribution of 2427  
habitats of 2427  
in ponds, effects of insect growth regulators on 2412, 3024
- Chaoborus astictopus**  
control of, growth regulators for 3013  
in USA 2414, 3013  
in ponds, distribution pattern of 2414  
observing of 2415  
prey of 2414  
sampling of 2415
- Chaoborus cooki**  
biology of 2931  
in Canada 2931  
preying on, *Culicidae*, in Alberta 2931
- Chara globularis**, dominant in ponds without mosquito larvae 384
- charlottensis**, *Catallagia charreyroni*, *Tityus trivittatus*
- Chatia**, taxonomy of 3095
- Chatia cunninghamae**  
sp. nov., description of 3095  
in USA 3095  
on *Tamiasciurus douglasii*, in Washington State 3095
- Cheese**, mites in, antigens of 1669
- Cheiracanthium**, on man, effects of bites by 1478
- Cheironitis**, in cattle dung, in Bulgaria 1385
- Chelocnetha angustitarse** (see *Simulium angustitarse*)
- Chemosterilants**  
substances tested as:  
aristolochic acid 1755  
tri-o-cresyl phosphate 673
- cheopis**, *Xenopsylla*
- Chernetidae**, on *Neotomodon*, in Mexico 1458
- Cheumatopsyche**, in rivers, as indicators of effects of insecticides 1292
- Cheyletidae**  
in Malaysia 2771  
taxonomy of 2480
- Cheyletiella**  
control of, acaricides for 983, 1965  
on cat  
in Connecticut 1965  
in Japan 983  
on dog, in Connecticut 1965  
on man  
dermatitis caused by 1965  
in Japan 983  
on rabbit, in Indonesia 2806
- Cheyletiella blakei**  
control of, acaricides for 515  
in Austria 515  
in Japan 288  
on cat  
in Austria 515  
in Japan 288  
transfer to man of 1414  
on man, transfer from cat of 288  
taxonomy of, characters distinguishing *C. parasitivorax* and 515
- Cheyletiella parasitivorax** 1965  
in Japan 288  
in Mexico 2774  
in USA 3145  
on guinea-pig, alopecia caused by 2774  
on rabbit  
alopecia caused by 2774  
in Japan 288  
on *Sylvilagus floridanus*, in Indiana 3145  
taxonomy of, characters distinguishing *C. blakei* and 515
- Cheyletiella yaguri**  
control of, acaricides for 12  
descriptions of 12  
in Italy 12  
on dog  
in Italy 12  
transfer to man of 1414, 1417  
on man  
hypersensitivity to 12  
pruritus caused by 1417
- Cheyletiellidae**, taxonomy of 2480
- Cheyletus**  
chaetotaxy in 733  
in Afrotropical region 733  
key 506  
on *Suncus murinus*, in Burma 2775
- Cheyletus bidentatus**  
sp. nov., description of 2771  
in Malaysia 2771  
in *Hylopates spadiceus* nests, in West Malaysia 2771
- Cheyletus eruditus**, distribution of 733
- Cheyletus hendersoni**, taxonomy of, characters distinguishing *C. tenuipilis* and 300
- Cheyletus malaccensis**, distribution of 733
- Cheyletus pluridens**  
sp. nov., description of 2771  
in Malaysia 2771  
on *Rhinosciurus laticaudatus*, in West Malaysia 2771
- Cheyletus tenuipilis**  
sp. nov., description of 300  
in Belgium 300  
in Israel 300  
in Switzerland 300  
in house dust 300
- Cheyletus trouessarti**, taxonomy of, characters distinguishing *C. tenuipilis* and 300
- Cheyletus woodroffei**  
sp. nov., description of 506  
in UK 506  
in bat roosts, in England 506
- Chicken** (see Fowl)
- Chikungunya virus**  
in  
*Aedes africanus*, in Central African Republic 2066  
*A. albopictus*, mutants of 836  
*A. opok*, in Central African Republic 2066  
*Cercopithecus aethiops*, in Central African Republic 2066  
*Culex molestus*, replication of 85  
man  
in Central African Republic 2066  
in West Malaysia 1246  
*Papio anubis*, in Central African Republic 2066
- Chile**  
Chagas' disease in 3176  
*Triatoma infestans* in, flagellates in 3176  
*T. spinolai* in, flagellates in 3176
- China**  
*Aedes* spp. in 2605  
*A. flavopictus* in 1559  
*A. scutellaris* in 1765  
*Anopheles* spp. in 855, 2880  
*A. sinensis* in 2140  
*Ascoschoengastia* spp. in 293  
Calliphoridae in 214  
*Ceratophyllus nanshanensis* in 819  
*Chaetopsylla wenxianensis* in 361  
*Cratynius yunnanensis* in, on *Hylomys* 3180  
*Culex* spp. in 2053  
*Culicidae* in 1827, 2349  
*Culicoides* spp. in 2649  
Enderleinellidae in, on squirrels 558  
filariasis in 2140



## China contd.

- Gahriepia latiscutata* in, on *Eothenomys* 3098
- Genoneopsylla* spp. in 2864
- Haemaphysalis* spp. in 972
- H. qinghaiensis* in, on goat 265
- Haematopinus longus* in, on *Cervus* 1497
- Haematopota* spp. in 215
- Herpetacarus* spp. in 2231
- Huabangsha megachela* in, on *Mus* 996
- Hystriehopsylla rotundisinuata* in 2580
- H. weida* in, in small-mammal nests 569
- Ixodidae in 973
- Japanese encephalitis in 1827
- Leptotrombidium* spp. in, on small mammals 2245
- L. bengbuensis* in, on *Rattus* 3098
- L. laxoscutum* in, on *Pipistrellus* 3099
- L. nanlingense* in, on *Rattus* 2247
- L. nudisensillum* in, on *Rattus* 2246
- Macrostylophora hebeiensis* in, on *Trogopterus* 1188
- M. paoshanensis* in, on *Sciurotamias* 818
- malaria in 2880
- Muritrombicula dali* in, on *Rattus* 2246
- Muscidae in 1618
- Neopsylla biseta* in, on small mammals 570
- Phlebotomus chinensis* in 868
- P. major* in 421
- Ratemia asiatica* in, on horse 2855
- Sarcophagidae in 213, 216
- Sergentomyia minuta* in 421
- Siphonaptera in 567
- on small mammals 568
- Trombiculidae in 294, 997, 1667
- on Rodentia 2760
- Walchia* spp. in, on *Apodemus* 1003
- W. jiangxiensis* in
- on *Apodemus* 3100
- on *Rattus* 3100
- chinensis, Phlebotomus**
- Chionanthus virginicus*, *Vespa crabro* on, damage caused by 1631
- Chipmunk, least** (see *Eutamias minimus*)
- Chironomidae**
- Bacillus thuringiensis* in, pathogenicity of 1250, 2086, 2925, 3296
- control of
- biological 1911
- growth regulators for 3013
- non-target effects of 3024
- review 912
- endosulfan in, toxicity of 3005
- fenethacarb in, toxicity of 1530
- in Auckland Islands 1252
- in California 2118
- in Campbell Island 1252
- in *Culicoides occidentalis* mating swarms, in California 2385
- in recreational lakes, in USA 912
- in rice-fields
- effects of fertilizers on 1624
- in California 2093
- in swamps, effects of insecticides on 2163
- Mermithidae in 1134
- methoxychlor in, toxicity of 2980
- on *Rhododendron*, in Pennsylvania 3359
- palpal sensilla in 3309
- preyed on by
- fish 1543
- Gambusia affinis*, in California 2093
- Procladius* spp., in Poland 1917
- sugar-feeding in 3359
- symposium on 196
- Chironomus**
- control of, insecticides for 2413
- in animal waste lagoons, effects of organic pollution on 1814
- in flood-control systems, in California 2413
- thyroxine in, effects on development of 3256
- Chironomus attenuatus*
- in USA 3342
- Microsporidium chironomi* in, in Florida 3342
- Chironomus crassicaudatus*
- emergence in 1905
- in USA 1905

**Chironomus decorus**

- control of
- biological 670
- growth regulators for 1366, 2412
- insecticides for 3346
- emergence in 1905
- entomopox virus in, transovum transmission of 448
- in USA 670, 1366, 1905, 2412, 3346
- in flood-control channels, in California 3346
- Chironomus kiliensis**
- in Japan 1624
- in rice-fields, effects of fertilizers on 1624
- Chironomus plumosus**
- Bacillus thuringiensis* in, not pathogenic 1797
- in Canada 1902
- Octomyomermis itascensis* in, in Ontario 1902
- Chironomus riparius**
- adults of, maintaining of 3353
- swarming in 3021
- Chironomus thummi** (see *C. riparius*)
- Chiropodomys gliroides**
- Myobia malaysiensis* on, in Malaysia 2483
- Radfordia chiropodomys* on, in Malaysia 2483
- chiropodomys, Radfordia**
- Chiropetella anhuiensis**
- sp. nov., description of 294
- in China 294
- on *Miniopterus schreibersii*, in Anhui 294
- Chiropetella subakamushi**
- in USSR 1071
- on bat, in Uzbekistan 1071
- Chiroptera** (see Bat)
- Chirorhynchobia matsoni**
- in Mexico 2243
- on *Anoura geoffroyi*, in Mexico 2243
- Chitin**
- in *Leucophaea maderae*, insect growth regulators as inhibitors of synthesis of 1453
- in *Lucilia cuprina* larval cuticle, effects of diflubenzuron on deposition of 911
- screening inhibitors of synthesis of 452
- Chitin synthase** (see Acetylglucosaminyltransferase, chitin-uridine diphosphate)
- Chlamydia**
- in
- cattle, in California 267
- Ornithodoros coriaceus*
- in California 267
- transmission of 267
- Chlamydiaceae**, tick lysozyme in, effects of 2745
- Chloramphenicol**, in *Periplaneta americana*, increasing susceptibility to carbaryl 2505
- Chlordecone** (1,1a,3,3a,4,5,5a,5b,6-decachlorooctahydro-1,3,4-metheno-2H-cyclobuta[cd]pentalen-2-one)
- against, *Monomorium pharaonis* 693
- Chlordimeform** (*N*'-(4-chloro-2-methylphenyl)-*N,N*-dimethylmethanimidamide)
- in *Schistocerca gregaria*, mimicking octopamine 1431
- Chlorfenethol** (4-chloro- $\alpha$ -(4-chlorophenyl)- $\alpha$ -methylbenzenemethanol)
- synergist for, DDT 2353, 3238
- Chlorfenvinphos** (2-chloro-1-(2,4-dichlorophenyl)ethenyl diethyl phosphate)
- against
- Lucilia cuprina*, on sheep 169
- Musca domestica* 773
- in building materials, persistence of 773
- in *Buphagus erythrorhynchus*, toxicity of 1643
- in cattle dips, determination of 235
- resistance to, in
- Boophilus microplus*, in South Africa 939
- Lucilia cuprina*, in Queensland 194
- with dioxathion, in *Buphagus erythrorhynchus*, toxicity of 1643
- Chloride**
- in *Amblyomma maculatum* 1644

**Chloride contd.**

- in *Calliphora vicina*, recycling in rectum of 2175
- in *Nauphoeta cinerea* salivary glands, transport of 333
- in *Simulium* breeding water 2666
- Chloroform, methyl-** (see Ethane, 1,1,1-trichloro-)
- Chloromethiuron** (*N*'-(4-chloro-2-methylphenyl)-*N,N*-dimethylthiourea)
- against
- Anocentor nitens*, on cattle 2218
- Boophilus microplus*, on cattle 2218
- in *Buphagus erythrorhynchus*, toxicity of 1643
- Chlorophos** (see Trichlorophen)
- Chlorophyta**, eaten by *Simulium* larvae 1037
- Chloropidae**
- in North America 1832
- taxonomy of 1832
- chloropterus, Sabethes**
- chloropus, Ornithomya**
- chloropyga, Chrysomya**
- Chlorophoxim** (7-(2-chlorophenyl)-4-ethoxy-3,5-dioxo-6-aza-4-phosphaoct-6-ene-8-nitrile 4-sulfide)
- against
- Culicidae 1712
- Simulium sanctipauli* 2678
- S. soubrense* 2678
- Chlorpyrifos** (*O,O*-diethyl *O*-(3,5,6-trichloro-2-pyridinyl) phosphorothioate)
- against
- Aedes* spp., in wildlife areas 2121
- A. aegypti* 2133
- Alphitobius diaperinus*, in fowl housing 687
- Amblyomma americanum* 3059
- Anopheles spp. 3194
- Blattella germanica* 771
- Boophilus microplus* 939
- Chironomidae 3346
- Culex molestus* 401
- C. pipiens* 761, 772, 1822
- C. quinquefasciatus* 2366
- in pig waste 374
- in storm drains 2113
- C. restuans* 1822
- Culicidae 1709, 2829, 3209
- Damalinia bovis*, on cattle 1742
- Haematopinus suis*, on pig 1743
- Musca domestica* 761
- Panstrongylus megistus* 2018
- Rhodnius prolixus* 2018
- Triatoma infestans* 2018
- Triatominae, in dwellings 807
- anticholinesterase activity of 761
- formulations of, controlled release 2829
- fumigant activity of 1743
- in building materials, persistence of 771
- in mouse, toxicity of 761
- in sugar-cane products, residues of 1802
- on walls, persistence of 401
- resistance to, in
- Culex pipiens* 3266
- in Italy 772
- C. quinquefasciatus* 1221
- in Tanzania 2366, 2928
- selective toxicity of 761
- Chlorpyrifos-methyl** (*O,O*-dimethyl *O*-(3,5,6-trichloro-2-pyridinyl) phosphorothioate)
- against
- Blattaria 788
- Simulium damnosum* 2668
- S. erythrocephalum* 2668
- S. ornatum* 2668
- formulations of, microencapsulated 2668
- Choanotaenia infundibulum**
- in, Carabidae 489
- vectors of 316
- chodukini, Atylotus**
- Cholera**, in USSR 3413
- Cholest-5-en-3-ol** ( $\beta$ )-
- diet component for, *Culex pipiens* 3214
- in *Boophilus decoloratus* eggs 2210
- in *Periplaneta americana* ovaries, effects of chemosterilants on 1165
- Cholest-7-en-6-one, 3,14-dihydroxy-**, ( $\beta$ , $\beta$ ), in *Heterometrus bengalensis*, toxicity of 2782

- Cholest-7-en-6-one, 2,3,14,20,22,25-hexahydroxy-, (2 $\beta$ ,3 $\beta$ ,5 $\beta$ ,22R)-** ( $\beta$ -ecdysone; ecdysterone; 20-hydroxy- $\alpha$ -ecdysone)
- immune serum to 787
  - in *Aedes aegypti*
    - effects on ovarian development of 408
    - effects on vitellogenesis of 3268
  - in *Aedes aegypti* cell lines, stimulating acetylcholinesterase activity 3262
  - in *Aedes atropalpus*
    - inducing ovarian development in decapitated females 1542
    - inducing ovarian development 2598
    - role in ovarian development of 125
  - in *Anopheles freeborni*, effects on retention of blood-meal of 848
  - in *Boettcherisca peregrina*
    - inactivation and reactivation of 1377
    - suppressing growth of cell lines 886
  - in *Calliphora stygia*, precursors of 889
  - in *Calliphora vicina*
    - effects on muscle metamorphosis of 2180
    - effects on nucleic acid synthesis of 3354
    - effects on protein synthesis of 3354
  - in *Culex pipiens*, inducing moulting 407
  - in *Ornithodoros moubata* hemolymph 270
  - in *Periplaneta americana*, developmental changes in 787
  - in *Rhodnius*, causing release of ovulation hormone 3175
  - in *Sarcophaga bullata*
    - activity pattern of 2173
    - inducing vitellogenin synthesis 2701
    - overcoming vitellogenesis inhibition by abscisic acid 3360
  - in *Stomoxys calcitrans* larvae, activity pattern of 2418
  - in *Trianthema portulacastrum*, production in callus cultures of 3130
- Cholest-7-en-6-one, 2,3,14,20,22,26-hexahydroxy-, (2 $\beta$ ,3 $\beta$ ,5 $\beta$ ,22R)-**, immune serum to 787
- Cholest-7-en-6-one, 2,3,14,22,25-pentahydroxy-, (2 $\beta$ ,3 $\beta$ ,5 $\beta$ ,22R)-** ( $\alpha$ -ecdysone)
- fluorometric determination of 753
  - immune serum to 787
  - in *Periplaneta americana*, developmental changes in 787
- Cholesterol** (see Cholest-5-en-3-ol, (3 $\beta$ )-)
- Choline, acetyl-** (see Ethanaminium, 2-(acetyloxy)-N,N,N-trimethyl-)
- cholodkovskii, Gnus** (see *Simulium cholodkovskii*)
- cholodkovskii, Simulium (Gnus)**
- Choloepus didactylus, Lutzomyia umbratilis** on, in French Guiana 2969
- Chorioptes, Dermatophilus congolensis** in, transmission of 777
- Chorioptes bovis**
- control of, acaricides for 504, 2761
  - HCH resistance in, in Scotland 2761
  - in Indonesia 2806
  - in UK 2761
  - on cattle
    - diagnosis of 2761
    - in Indonesia 2806
  - on goat, in Indonesia 2806
- christophersi, Sergeantomyia**
- Chromatin, in Periplaneta americana ovaries**, effects of chemosterilants on 1165
- Chromosomes**
- Aedes* 1547
  - A. togoi* 1787, 2905
  - Anopheles* 2899
  - A. aconitus* 1558
  - A. albimanus* 1808
  - A. aruni* 1545
  - A. culicifacies* 81, 119
  - A. dirus* 620, 2921
  - A. funestus* 1545
  - A. maculipennis* complex 2356
  - A. parensis* 1545
  - A. stephensi* 601, 2894
- Chromosomes contd.**
- Anopheles contd.**
- A. superpictus* 770
  - Argas arboreus* 2469
  - Boophilus annulatus* 3071
  - B. microplus* 3071
  - Ctenocephalides orientis* 2581
  - Culex pipiens* group 2646
  - C. tritaeniorhynchus* 1557, 2377
  - Culicidae 1478
  - Culiseta longiareolata* 388, 1831
  - Eusimulium* 1579
  - Glossina* spp. 148
  - insects, book 1995
  - Lucilia cuprina* 1897, 2202
  - Musca domestica* 665, 1365
  - Rhodnius neglectus* 1500, 1501
  - R. neivai* 1500, 1501
  - R. pictipes* 1500
  - R. prolixus* 1500
  - R. robustus* 1500, 1501
  - Sarcophaga hirtipes* 3020
  - Scorpiones 1478
  - Stomoxys calcitrans* 450, 3370
  - Triatoma pallidipennis* 1502
- Chrysanthemic acid** (2,2-dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylic acid)
- laboratory synthesis of 1434
- Chrysanthemum cinerariaefolium**, pyrethrins in 1434
- Chrysanthemumdicarboxylic acid** (see Cyclopropanecarboxylic acid, 3-(2-carboxy-1-propenyl)-2,2-dimethyl-)
- Chrysomya**
- in New Caledonia 3339
  - in Thailand 662
  - reproduction in 2381
  - wings in, morphometric characters of 1352
- Chrysomya albiceps**
- in Brazil 195
  - in Guatemala 2420
  - mating in 2445
- Chrysomya albiceps rufifacies** (see *C. rufifacies*)
- Chrysomya bezziana** 893
- in Malaysia 2170, 2538
  - on *Bos taurus*  $\times$  *B. indicus*, effects of 663
  - on man, in West Malaysia 2170
  - on zebu, in Malaysia 2538
- Chrysomya chloropyga**
- control of, traps for 2928
  - Entomophthora apiculata* in, in Nigeria 202
  - in Brazil 195
  - in Nigeria 202
  - in Tanzania 2928
  - in cess pits, in Tanzania 2928
  - in pit latrines, in Tanzania 2928
- Chrysomya chloropyga putoria** (see *C. chloropyga*)
- Chrysomya megacephala**
- in Brazil 195
  - in New Caledonia 3339
  - in USA (Hawaii) 480
  - in fowl carcasses, in Hawaii 480
  - sterilisation of, chemosterilants for 885, 3365
- Chrysomya nigripes**, descriptions of 893
- Chrysomya putoria** (see *C. chloropyga*)
- Chrysomya rufifacies**
- descriptions of 893
  - in Australia 164, 165
  - in New Caledonia 3339
  - on sheep
    - in Australia 164
    - in Western Australia 165
  - sex determination in 159
- Chrysomya saffraanea**
- descriptions of 893
  - in Australia 164
  - on sheep, in Australia 164
- Chrysomya varipes**
- descriptions of 893
  - in Australia 164
  - on sheep, in Australia 164
- Chrysomyinae**, in Thailand 662
- Chrysops**
- blood-feeding in, effects on life-span of 1921
  - feeding behaviour in 2443
- Chrysops contd.**
- hosts of, visual selection of 1376
  - in Argentina 1476
  - in Norway 1907
  - in Soviet Far East 3348
  - in USSR 2692, 3040
  - in Uzbekistan 1070
  - on cattle, in Connecticut 2443
  - parasitised by, *Trichogramma* spp., in New York State 3373
  - sugar-feeding in, effects on life-span of 1921
- Chrysops aberrans**, in Canada 2197
- Chrysops ater** (see *C. carbonarius*)
- Chrysops callidus**
- blood-meals in 1899
  - in USA 1899
  - on cattle, distribution pattern of 1899
- Chrysops calvus**, in USA 661
- Chrysops carbonarius**
- in USA 2416
  - ovarian development in 2416
- Chrysops dimidiatus**, in Gabon 861
- Chrysops fuliginosus**, in Canada 2197
- Chrysops longicornis**, in Gabon 861
- Chrysops mitis**
- in USA 2416
  - ovarian development in 2416
- Chrysops montanus**, in Canada 2197
- Chrysops nigripes**, in USSR 2692
- Chrysops pictus**, in USSR 2694
- Chrysops relictus**
- activity in 2409
  - in USSR 2409, 3336
- Tabanomyces milkoii* in, in Ukraine 3336
- Chrysops silaceus**, in Gabon 861
- chrysorrhoea, Euproctis**
- Chydorus**, in water supply, effects of permethrin on 2713
- Chymotrypsin**, in *Culex pipiens*, inhibitors of 2075
- Cicadellidae**, in *Culicoides occidentalis* mating swarms, in California 2385
- Cicuta douglasii, Depressaria angustata** on, in British Columbia 2617
- Cidial** (see Phenthoate)
- Ciliata** 1902, 3136
- Lambornella clarki* 2360
  - L. stegomyiae* 2360
  - Tetrahymena* 429
- Ciliates**
- in
    - Chironomus plumosus*, in Ontario 1902
    - insects 3136
- cilipes, Azelia**
- cilipes, Trichopria** (see *Aclista alticollis*)
- Cimex**
- on man, antibodies to 562
  - on rabbit, antibodies to 562
  - tracheoles in 2835
- Cimex adjunctus**
- in USA 2582
  - in bat dung, in Massachusetts 2582
- Cimex brevis**
- in Canada 2863
  - on *Myotis lucifugus*, in Ontario 2863
  - Trypanosoma hedricki* in, development of 2863
- Cimex hemipterus**
- hempa in, effects of 2300
  - hepatitis B surface antigens in, excretion of 1511
  - mycetomes in 2301
  - sterilisation of, chemosterilants for 43
- Cimex lectularius**
- biology of 803
  - bromophos resistance in, not found 1184
  - control of 1147
    - insecticides for 1184, 1718, 2562
  - DDT resistance in, loss of 2572
  - dieldrin resistance in, persistence of 1184
  - fecundity in 2572
  - hepatitis B virus in, transmission of 1512, 2006
  - in India 2562
  - in UK 1139, 1147
  - in USSR 1718
  - in animal housing, in Andhra Pradesh 2562
  - in fowl housing, in Armenia 1718
  - insecticides in, determining of susceptibility to 3178



- Cimex lectularius** *contd.*  
 olfaction in, effects of feeding regime on 1748  
 olfactory system in, evolution of 3132  
 on man, in central Europe 803  
 trichlorophon resistance in, loss of 2572
- Cimexan** (see Malathion)
- Cimicidae**, in Nigeria 2003
- Cinchonan-9-ol, 6'-methoxy-, (8 $\alpha$ ,9R)-**, in *Periplaneta americana*, effects on accessory reproductive glands of 339
- cinerea**, *Formica*
- cinerea**, *Nauphoeta*
- cinerea**, *Nepa*
- cinereus**, *Aedes*
- Ciodrin** (see Crotoxyphos)
- Cionella lubrica**  
 control of, biological 2727  
*Dicrocoelium lanceolatum* in, in France 2727
- Circadian rhythms**  
*Culex quinquefasciatus*, flight activity 67, 406, 858  
*Forficula auricularia*, activity 315  
*Leucophaea maderae*  
 activity 1162  
 locomotion 1168  
*Phormia terraenovae*, proboscis extension response 678  
*Sarcophaga argyrostoma*, eclosion 1600  
 Scorpiones, activity 315  
 Triatominae, activity 315  
 book 20
- circularis**, *Tyrrellia*
- circummaculata**, *Triatoma*
- circumscriptus**, *Culicoides*
- Cismethrin** ([5-(phenylmethyl)-3-furanyl]methyl (1R-*cis*)-2,2-dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylate)  
 in *Periplaneta americana*, neurotoxicity of 3435  
 in rat, toxicity of 1452
- Cisterns**, *Culex quinquefasciatus* in, in Tamil Nadu 2600
- Citellophilus simplex**  
 in Czechoslovakia 362  
 in *Citellus citellus* nests, in Czechoslovakia 362  
 seasonal abundance of 362
- Citellophilus tesquorum**  
 control of, insecticides for 2868  
 in USSR 2868  
 on Rodentia, in Caucasus 2868
- Citellus citellus**  
*Ixodes laguri* in nests of, development of 239  
 Siphonaptera in nests of, in Czechoslovakia 362
- Citral** (see 2,6-Octadienal, 3,7-dimethyl-)
- Citric acid** (see 1,2,3-Propanetricarboxylic acid, 2-hydroxy-)
- Citronellal** (see 6-Octenal, 3,7-dimethyl-)
- Citrus paradisi** (see Grapefruit)
- clairei**, *Hybomitra*
- Cladocera**, *Bacillus thuringiensis* in, not pathogenic 3296
- Cladotanytarsus lewisi**  
 allergens of 2192  
 in Sudan 1596, 2192  
 on man, hypersensitivity to, diagnosis of 1596
- clastriieri**, *Culicoides*
- Clausilia**, *Dicrocoelium dendriticum* in, in Yugoslavia 688
- claustrai**, *Lutzomyia*
- claviger**, *Anopheles*
- claviprocera**, *Genoneopsylla*
- Clays**, insecticides in, persistence of 2039
- clethrionomydis**, *Laelaps*
- Clethrionomys**  
 ectoparasites of, in Scandinavia 2338  
*Hepatoozon erhardovae* in, in German Federal Republic 2331  
*Peromyscopsylla silvatica* on, in Siberia 1052
- Clethrionomys gapperi**, *Ixodes muris* on, in Canada 720
- Clethrionomys glareolus**  
 Anoplura on, in USSR 2571  
 arthropod parasites of, in USSR 1046  
*Ctenophthalmus uncinatus* on, in USSR 1042
- Clethrionomys glareolus** *contd.*  
*Hoplopleura edentula* on, in USSR 343  
*Ixodes ricinus* on, in France 3392  
*I. trianguliceps* on, in Ukraine 2736  
*Neopodocinum mrciaki* on, in Poland 729  
 Siphonaptera on  
 in USSR 1049  
 removal by host of 2342  
 tick-borne encephalitis, virus in, strains of 3069
- Clethrionomys rufocanus**  
 arthropod parasites of, in Maritime Territory 3389  
*Hoplopleura edentula* on, in USSR 343  
*Neotrombicula pomeranzevi* on, effects on skin of 507
- Clethrionomys rutilus**  
 arthropod parasites of, in Maritime Territory 3389  
*Hoplopleura edentula* on, in USSR 343  
*Ixodes persulcatus* on, encounter rates of 1044  
*Megabothris calcarifer* on, in Alaska 2322
- clethrionomys**, *Speleorodens*
- Clostridium botulinum**  
 in  
*Calliphora* spp., in Washington State 2186  
 pheasant, in Washington State 2186  
*Wohlfahrtia* spp., in Washington State 2186
- clydei**, *Sergentomyia*
- CME-10005** (see Imidazolidine, 1,3-bis(3-chlorophenyl)-2-(trichloromethyl)-)
- Cnephia**  
 control of, biological 3313  
 in Transbaikalia 1067  
 in Ukraine 1059  
 in streams, in Newfoundland 3313  
 maxillary sensilla in 3309  
 pathogens of, in Guatemala 144
- Cnephia dacotensis**  
 in Canada 3311  
 rearing of, techniques for 431
- Cnephia maculata**, in USSR 1059
- Cnephia mutata**, Mermithidae in, specificity of 643
- Cnetha** (see *Simulium*)
- Cnetha angustitarse** (see *Simulium angustitarse*)
- Cnetha latipes** (see *Simulium latipes*)
- Cnetha pathrushevae** (see *Simulium pathrushevae*)
- Cnidaria** 3148
- Cnidosporida** 642, 1038, 1045, 1055, 2097, 2517, 2839, 3136  
*Amblyospora bracteata* 144, 1059, 1268  
*A. minuta* 1025  
*A. opacita* 402, 1025  
*A. polykarya* 2077  
*Burenella dimorpha* 3388  
*Diffingera spinosa* 1890  
*D. turgenica* 1890  
*Microsporidium chironomi* 3342  
*M. goeldichironomi* 3342  
*Nosema* 1020  
*N. algerae* 112, 747, 1539, 2633, 3259  
*Parathelohania* 1197  
*P. legeri* 1025  
*P. obesa* 1025  
*Pleistophora debaisieuxi* 144, 1059, 1268  
*P. multispora* 144, 1268  
*P. simulii* 1059, 1268  
*Stempellia* 1020  
*S. captshagaica* 1025  
*Thelohania fibrata* 144, 1059, 1268  
*T. solenopsae* 1627  
*T. varians* 1059, 1268  
*Toxoglugea* 609  
*T. variabilis* 2653  
*Vavraia culicis* 2891
- coarctata**, *Acanthocera*
- Coastal resorts**, mosquito control in 1712
- Coccidae**, chromosomes in 1995
- Coccidia**  
 book 2259  
 in  
 insects 3136  
 pig, in German Federal Republic 1959
- Coccoidea**, mounting media for 1149
- Cochliomyia hominivorax**  
 attractants for 1132, 2429  
 bibliography 3362  
 control of 457  
 baits for 1132, 2169  
 insecticides for 1132, 2169  
 review 1362  
 sterile-insect release for 456, 1919  
 in Mexico 456, 1464, 2429  
 in Netherlands Antilles 457, 1132  
 in USA 1346, 1362, 1919, 2169  
 marking of, fluorescent dyes for 1133  
 mating competitiveness in 1919  
 on dog, in Netherlands Antilles 457  
 on goat, in Netherlands Antilles 457  
 on man, in Netherlands Antilles 457  
 on pig, in Netherlands Antilles 457  
 oogenesis in 1342, 1343  
*Proteus* spp. in, role in life-cycle of 1920  
 rearing of  
 diets for 1918  
 quality control in 1463  
 sexual stimulation in, by swormlure-2 1896  
 traps for 1464, 2429  
 anaesthetising of catches in 2434
- Cochliomyia macellaria**  
 anaerobic metabolism in 1359  
 attractants for 2429  
 bacteria in, in Brazil 479  
 in Brazil 479  
 in Mexico 2429  
 in USA 1346  
 in abattoirs, in Brazil 479  
 Malpighian tubules in, phosphate retention in, sex differences in 671  
 marking of, fluorescent dyes for 1133  
 traps for 2429
- Cockroach** (see Blattaria)
- codreanui**, *Eusimulium* (see *Simulium codreanui*)
- codreanui**, *Simulium* (*Eusimulium*)
- Coelenterata**, index-catalogue 3148
- Coelomomyces**  
 in  
*Aedes malikuli*, in Taiwan 2031  
*A. trivittatus*, in Manitoba 622  
*Anopheles arabiensis*, in Nigeria 767  
*A. gambiae*, in Nigeria 767  
 Culicidae, in USSR 1038  
 medically-important arthropods, bibliography 2517
- Coelomomyces ciferrii**, taxonomy of 2660
- Coelomomyces dodgei**  
 hybridisation of *C. punctatus* and 394  
 in, *Acanthocyclops vernalis*, production of 611
- Coelomomyces dubitskii**, sporangia in 2031
- Coelomomyces iliensis**, in, *Culex pipiens*, development of infection with 1065
- Coelomomyces indicus**  
 in  
*Anopheles arabiensis*, in Nigeria 767  
*A. gambiae*, in Nigeria 767
- Coelomomyces lativittatus** 394
- Coelomomyces macleayae**  
 in  
*Aedes alcasidi*, in Taiwan 2031  
*A. japonicus*, in Taiwan 2031  
*Tripteroides bambusa*, in Taiwan 2031
- Coelomomyces milkoii**  
 in  
 Tabanidae, development of infection with 1065  
*Tabanus autumnalis*, in Uzbekistan 445
- Coelomomyces omorii**  
 in, *Culex vishnui*, in Taiwan 2031  
 sporangia in 2031
- Coelomomyces opifexi**  
 in  
*Aedes australis*, mode of entry of 107  
*Tigriopus* spp., mode of entry of 107
- Coelomomyces ponticus**  
 sp. nov., description of 588  
 in, *Aedes flavopictus*, in Japan 588
- Coelomomyces psorophorae**, host specificity in 1237
- Coelomomyces punctatus**, hybridisation of *C. dodgei* and 394
- Coelomomyces quadrangulatus**, in, *Uranotaenia* spp., in Taiwan 2031

**Coelomomyces stegomyiae**

- in  
*Aedes albopictus*, in Taiwan 2031  
*A. flavopictus*, in Japan 588  
*Armigeres subulatus*, in Taiwan 2031  
*Topomyia yanbarensis*, in Taiwan 2031

*Tripteroides bambusa*, in Taiwan 2031

**Coelomomyces stegomyiae chapmani**, var. nov., description of 2031

**Coelomycidium**, in, Simuliidae, in Guatemala 144

**Coelomycidium simulii**, in, *Simulium* ornatum, localisation of 1065

**Coendalges panamensis**

gen. et sp. nov., description of 732 in Panama 732

on *Coendou rothschildi*, in Panama 732

**Coendalginiae**, taxonomy of, new subfamily in Lobalgiidae 732

*Coendou rothschildi*, *Coendalges panamensis* on, in Panama 732

*Coffea arabica* (see Coffee)

*Coffea canephora* (see Coffee)

Coffee (*Coffea* spp.)

Coffee plantations, *Simulium horacioi* in, in Guatemala 1582

**cognata**, *Zygoribatula*

**cognatus**, *Stivalius*

**colabaensis**, *Phlebotomus*

**Colchicine**

in *Lucilia sericata*, inhibiting sugar receptors 461

sterilant for, *Chrysomya megacephala* 885, 3365

**Coleoptera**

*Bacillus thuringiensis* in, not pathogenic 3296

blood-feeding in, evolution of 1170

*Culicinomyces clavosporus* in, not pathogenic 1829

helminths in, in Uzbekistan 316

in *Agelaius phoeniceus* nests, in Manitoba 864

in birds' nests, in UK 776

in cattle dung

in Morocco 3386

successions of 490

in cattle-dung fertilizer, in Irish Republic 324

in dung, traps for 3380

in fresh water, effects of pyrethroids on 2157

in ponds, effects of insect growth

regulators on 3024

in poultry dung, in North Carolina 226

in poultry housing, in England 1717

in rice-fields, in California 2093

on man, hypersensitivity to 319

overwintering of, in birds' nests 2005

phoretic mites on, traps for 3380

preyed on by

fish 1543

*Gambusia affinis*, in California 2093

pyrethroids in, toxicity of 78, 876

taxonomy of 1719

**coleopratorum**, *Parasitus*

**Colinus virginianus**, arthropod parasites of, in USA 2001

Colitis, in man, role of mites in 980

**Collagenase**

in *Hypoderma lineatum* 1593

characterisation of 877

**Collembola**

in cattle-dung fertilizer, in Irish Republic 324

in ponds, effects of insect growth

regulators on 3024

overwintering of, in birds' nests 2005

**collocaliae**, *Ornithodoros*

**collusor**, *Hippelates* (see *Liohippелates*

*collusor*)

**collusor**, *Liohippелates* (*Hippelates*)

**Colocasia**, *Aedes* spp. in axils of, in Uganda 1116

**Colocasia esculenta**, *Aedes simpsoni* in axils of, in Nigeria 591

**Colombia**

*Aedes aegypti* in 116

*Anocentor nitens* in, on cattle 2218

*Anopheles mattogrossensis* in 3227

*A. nuneztovari* in 2068

*A. oswaldoi* in 3227

**Colombia contd.****Anopheles contd.**

*A. triannulatus* in 3227

*Boophilus microplus* in, on cattle 700, 2218

cattle in, tick control on 236

*Culex adamesi* in 584

*Culicoides* spp. in 2141

on man 2156

Psychodidae in 2661

*Simulium* spp. in, on man 2156

*S. argenticutatum* in 2399

*S. exiguum* in, on man 638

*S. metallicum* in, on man 638

*S. muiscorum* in 432

**coloradensis**, *Tarsopsylla octodecimdentata***Colorado**

Colorado tick fever in 3405, 3406

*Culicoides* spp. in 2384

*C. variipennis* in 1575, 2388

*Dermacentor andersoni* in, viruses in 1403, 3406

*Geomydoecus* spp. in, on *Thomomys* 1171

mosquito control in 3204

*Oeciacus vicarius* in

on man 44

viruses in 1749, 2219

*Uranotaenia sapphirina* in 1820

**Colorado tick fever**

ecology of 3405

virus

ecosystem of 1403

in

*Dermacentor andersoni*, in Colorado 1403, 3406

*Eutamias minimus*, in Colorado 1403

small mammals, in Colorado 3406

*Spermophilus lateralis*, in Colorado 1403

tick transmission of 3137

**Columba livia** (see Pigeon)

**columbae**, *Columbicola*

**columbiae**, *Psorophora*

**Columbicola columbae**, periesophageal

nephrocytes in 2852

**Columbiformes**, *Gonioididae* on 1495

**Columbinae**, *Physconelloides* spp. on 2566

**comma**, *Stenolophus*

**Commonwealth Agricultural Bureaux**, 50

years of 752

**communis**, *Aedes*

**comodoliacis**, *Haematopota*

**Comperia merceti**

biology of 555

distribution of 555

hosts of 555

in Argentina 555

in USA 1737

parasitising, *Supella longipalpa*, and

biological control using, in California 1737

rearing of, techniques for 1737

**Complement**, in man, not affected by scabies 1421

**Complement fixation tests**, for identifying

*Glossina* blood-meals 3322

**concanensis**, *Ornithodoros*

**Conchapelopia melanops**

habitats of 679

in Poland 679

*Stylocystis praecox* in, in Poland 679

**concinna**, *Haemaphysalis*

**Conferences (1974)**, International Congress

of Acarology 920

**Conferences (1976)**, BIOTROP symposium

on ectoparasite biology 2800

**Conferences (1977)**

International Conference on Fleas 2305

International Scientific Council for

Trypanosomiasis Research and Control 1297

Latinamerican Congress of Zoology 1472

WHO Expert Committee on Vector

Biology and Control 526

**Conferences (1978)**

All-Union Conference of

Parasitocoenologists 1018

Consultation on the Programme for the

Control of African Animal

Trypanosomiasis 1886

Entomological Society of America 1481

**Conferences (1978) contd.**

Entomological Society of Canada 2000

International Congress of Genetics 1547, 1579

Italian Society of Parasitology 763

National Congress of Entomology, Mexico 1122

National Congress of the Italian Society

of Parasitology 8

Practical tissue culture applications 1467

Scandinavian Congress of Allergology 280

Serology in insect predator-prey studies 1481

Society for Industrial Microbiology 1572

Temporal and spatial changes in the

Canadian insect fauna 2000

WHO Working Group on receptivity to

malaria and other parasitic diseases 76

World Ceratopogonidae Group 127

**Conferences (1979)**

Advances in insect taxonomy in India and

the Orient 14, 705

American Chemical Society 1534, 2260

British Crop Protection Conference –

Pests and Diseases 755

British Pest Control Conference 1138

Congress on the control of insects in the

tropical environment 1689

Entomological Society of America 2834

Entomological Society of America, East

Branch 543

Entomological Society of Korea 1726

Epidemiology of African trypanosomiasis 1859

Expert Consultation on Research on

Trypanosomiasis 1887

FAO Expert Consultation on

Environmental Criteria for

Registration of Pesticides 2786

FAO Panel of Experts on Pesticide

Residues in Food 529

FAO Panel of Experts on pesticide

residues in food and the environment 3128

Insect neurobiology and pesticide action

(Neurotox 79) 329

International Meeting of the Controlled

Release Society 2829

International Symposium on

Chironomidae 196

International Symposium on Infectious

Diseases of Livestock 2652

Isotope and radiation research on animal

diseases and their vectors 1082

Italian Society for the Study of Animal

Behaviour 821

National Congress of Entomology, Mexico 1457

National symposium on the sheep blowfly

and flystrike in sheep, Australia 161

Pesticide analytical methodology 2260

Recent advances in the chemistry of the

pyrethroids 1433

Scientific Conference of the African

Association of Insect Scientists 1107

Seminar on Trypanosomiasis 148

Swiss Society of Microbiology 113

Symposium on Human Babesiosis 3396

Symposium on microbial agents for the

control of insect pests 1534

Utah Mosquito Abatement Association 3201

Wellcome Haematropic Diseases

Symposium 935

WHO Expert Committee on Vector

Biology and Control 781

WHO Expert Group on Pesticide

Residues 529, 3128

Workshop in Neurotransmitter and

Hormone Receptors in Insects 1998

Zimbabwe Veterinary Association 2224

**Conferences (1980)**

Annual ICN-UCLA Symposia, Molecular

and Cellular Biology 1837

California Mosquito and Vector Control

Association 2079, 2385, 2411, 2495

International Congress of Entomology 530

International Symposium on Crop

Protection 1733

Kansas Entomological Society 1179



Conferences (1980) *contd.*

- Laveran Symposium on the biology, epidemiology and immunology of malaria 3193
- Mammalian safety of microbial control agents for vector control 2799
- Minimising occupational exposure to pesticides 1684
- National Congress of Parasitology, India 2837
- Ohio Academy of Science 1150
- Swiss Society of Microbiology 1565
- Symposium on yellow fever 2348
- Workshop on insect pest management with microbial agents: recent achievements, deficiencies and innovations 3118
- confervicolus*, *Anisogammarus confiformis*, *Hybomitra nitidifrons conformis*, *Xenopsylla confusum*, *Tribolium congener*, *Ctenophthalmus congeneroides*, *Ctenophthalmus Congo*
- Glossina* spp. in 1310
- G. palpalis* in, on man 2994
- malaria in 3195
- Sergentomyia hamoni* in 136
- sleeping sickness in 1310
- Congo virus**
- in
- Hyalomma marginatum*, replication of 2216
- Ornithodoros lahorensis*, in Iran 1637, 2211
- taxonomy of 1950
- tick transmission of 3137
- vectors of 1826, 1945
- Conifer plantations**, *Glossina pallidipes* in, in Kenya 3321
- Conilurus penicillatus*, *Laelaps parameces* on, in Western Australia 1653
- conjecta*, *Hydrachna*
- Conjunctivitis**, in man, caused by
- Sarcophaga carnaria* 769
- Connecticut**
- Aedes cantator* in, natural enemies of 2893
- Cheyletiella* spp. in, on man 1965
- Dermacentor variabilis* in 248
- Ixodes dammini* in 248
- I. dentatus* in, viruses in 1408
- Ixodidae* in
- on domestic animals 1398
- on man 1398
- Orius insidiosus* in, on *Peromyscus* 2025
- Psorophora ferox* in 1208
- Tabanidae* in 1921
- on cattle 2443
- Tabanus nigrovittatus* in, natural enemies of 1603
- Connecticut virus**
- in
- guinea-pig, antibodies to 1408
- Ixodes dentatus*, in Connecticut 1408
- mouse, pathogenicity of 1408
- Sylvilagus floridanus*, antibodies to 1408
- Connochaetes taurinus**
- arthropod parasites of, in South Africa 1888
- pest control on 1888
- Conorhinopsylla**, taxonomy of 1750
- Conorhinopsylla stanfordi**
- in USA 1514, 2339
- in *Glaucomys volans* nests, in USA 2339
- on *Glaucomys volans*, avoidance of competition by 1514
- seasonal abundance of 2339
- Consan**, against, *Aedes aegypti* 2816
- consimilis*, *Ceratophyllus* (see *Nosopsyllus consimilis*)
- consimilis*, *Nosopsyllus* (*Ceratophyllus*)
- Continental drift**
- flea evolution and zoogeography and 2311
- louse evolution and zoogeography and 2311
- convexus**, *Apallates* (*Hippelates*)
- convexus**, *Hippelates* (see *Apallates convexus*)
- cookei*, *Ixodes*
- cooki*, *Aedes*

*cooki*, *Chaoborus*

- Copepoda*, *Bacillus thuringiensis* in, not pathogenic 3296
- Copernicia*, *Rhodnius prolixus* in, in Venezuela 37
- Copris siangensis*
- sp. nov., description of 2724
- in India 2724
- in cattle dung, in Arunachal Pradesh 2724
- Coproica acutangula* (see *Leptocera acutangula*)
- Coproica ferruginata* (see *Leptocera ferruginata*)
- Coproica lugubris* (see *Leptocera lugubris*)
- Coproica vagans* (see *Leptocera vagans*)
- Coptopsylla*, in *Rhombomys opimus* burrows, distribution pattern of 1518
- Coptopsylla bairamaliensis*
- in USSR 571
- on *Rhombomys opimus*, assessing infestations of 571
- Coptopsylla olgae*
- in USSR 571
- on *Rhombomys opimus*, assessing infestations of 571
- Coquillettidia**
- control of 3265
- in France 3265
- Coquillettidia perturbans**
- biology of 2045
- feeding behaviour in 2614
- in Canada 1809, 2045, 2060, 2614, 2881
- in USA 1528
- oviposition in 2614
- seasonal abundance of 2060, 2614
- western equine encephalitis, virus in, in Manitoba 1809
- Coquillettidia richiardi*
- biology of 1031
- control of 2954
- biological 3298
- in France 2954
- in USSR 1031, 3191, 3263
- larval diet of 3263
- ovarioles in, autolysis of 3191
- Coral cays**, *Culicidae* in, in Queensland 106
- corbicula*, *Ameroseius*
- cordiger*, *Tabanus*
- Cordulia*, preying on, *Culicidae* 1038
- Cordylobia anthropophaga*
- biology of 2417
- control of, removal for 1375, 2417
- in Ghana 1375
- in Saudi Arabia 2537
- in Zaïre 2417
- on man 2453
- furunculosis caused by 2417
- in Ghana 1375
- in Saudi Arabia 2537
- Cordyluridae**, in Azerbaijan 899
- coregoni**, *Bosmina*
- Corethrella brakeleyi*, traps for 447
- Corethrella buettikeri*
- sp. nov., description of 2531
- in Saudi Arabia 2531
- Corethrella wirthi*, traps for 447
- coriaceus*, *Ornithodoros*
- Corixidae**
- fenethacarb in, toxicity of 1530
- in animal waste lagoons, effects of organic pollution on 1814
- in ponds, effects of insect growth regulators on 3024
- Cormura brevivirostris*, *Psorergatoides peropteryx* on, in French Guiana 736
- Corn** (U.S. usage) (see *Maize*)
- cornicina*, *Orthellia*
- cornifrons*, *Scarabaeus* (see *S. cristatus*)
- corniger*, *Culex*
- cornutus*, *Gallacanthus* (*Menacanthus*)
- cornutus*, *Menacanthus* (see *Gallacanthus cornutus*)
- coronator*, *Culex*
- corporis*, *Pediculus humanus* (see *P. humanus*)
- Corriparta virus**, in, *Toxorhynchites amboinensis*, infectivity of 589
- Corrodopsylla birulai**
- in USSR 2871, 3184
- on small mammals
- in Siberia 3184

*Corrodopsylla birulai contd.*

- on small mammals *contd.*
- in USSR 2871
- corrugatus**, *Enderleinellus*
- Corticosteroids** (see *Adrenal cortex hormones*)
- Corvidae**
- arthropod parasites of, in Kirghizia 1033
- bacteria in, in Kirghizia 1033
- Corvus brachyrhynchos**, *Chandlerella chitwoodae* in, *Ceratopogonid* transmission of 2651
- Corynebacterium pyogenes**
- in
- cattle, in Netherlands 890
- Hydrotaea irritans*, transmission of 890
- Coscarcoptes scanloni**
- descriptions of 3421
- in USA 3421
- on *Macaca arctoides*, in New York State 3421
- on man, in New York State 3421
- Costa Rica**
- Anastrepha* spp. in, on man 1344
- bancroftian filariasis in 2138
- Boophilus* spp. in, on cattle 3393
- Culex quinquefasciatus* in 2138
- Simuliidae* in 141
- Simulium metallicum* in, natural enemies of 2154
- S. panamense* in, natural enemies of 2154
- costalimai**, *Triatoma*
- costatum**, *Eusimulium* (see *Simulium costatum*)
- costatum**, *Simulium* (*Eusimulium*)
- costipennis**, *Brachinus*
- Cottage cheese**, diet component for, *Cochliomyia hominivorax* 1918
- Cotton** (*Gossypium* spp.)
- Cotton fields**
- Phlebotomus papatasi* in, in Turkmenia 2145
- Sergentomyia dentata* in, in Turkmenia 2145
- coturnicola**, *Rivoltasia*
- Coturnix coturnix** (see *Quail*)
- Cough**
- in pig, caused by *Vespa* 914
- in *Zalophus californianus*, caused by *Orthohalarachne diminuta* 1423
- Coumaphos** (O-(3-chloro-4-methyl-2-oxo-2H-1-benzopyran-7-yl) O,O-diethyl phosphorothioate)
- against
- Amblyomma* spp. 703
- Cochliomyia hominivorax* 1362
- Linognathus* spp., on sheep 503
- Musca domestica* 1893
- Psoroptes ovis*, on sheep 503
- Rhipicephalus sanguineus*, on dog 965
- Sarcoptes scabiei*, on pig 1959
- resistance to, in
- Boophilus microplus*, in South Africa 939
- Musca domestica*, role of cuticular wax in 198
- with trichlorophen, against, *Haematopinus tuberculatus*, on Asian buffalo 2250
- Coumarin** (see 2H-1-Benzopyran-2-one)
- Counterimmunoelectrophoresis** (see *Immunoelectrophoresis*)
- coustani**, *Anopheles*
- Cowdria ruminantium**
- control of, immunization for 945
- in
- Amblyomma hebraeum*, in South Africa 945
- A. variegatum*, transmission of 3060
- cattle
- in Mauritius 958
- in Zimbabwe 937
- goat, in Guadeloupe 958
- sheep, in Réunion 958
- Coxiella burnetii**
- in
- Cimex lectularius*, transmission of 803
- Dermacentor marginatus*, in Kirgizia 1688
- Haemaphysalis sulcata*, in Kirgizia 1688

- Coxiella burneti* contd.  
in contd.  
*Hyalomma anatolicum*, in Kirgizia 1688  
*H. marginatum*, in Kirgizia 1688  
*Ixodes ricinus*, in Lithuania 3399  
Ixodidae, transmission of 2747  
mites, in Czechoslovakia 924  
*Ornithodoros lahorensis*, development of 3070  
*Otobius megnini*, transmission of 3060  
*Rhipicephalus* spp., in India 2748  
*R. pumilio*, in Kirgizia 1688  
*R. sanguineus*, in Karnataka 2470  
*R. turanicus*, in Kirgizia 1688  
Coyote (see *Canis latrans*)  
Crab, *Simulium ovazzae* on, in Zaïre 2673  
*Crabro advena*  
in USA 1923  
nesting behaviour in 1923  
prey of 1923  
*crabro*, *Vespa*  
*cranifer*, *Blaberus*  
*crassicaudatus*, *Arrhenurus*  
*crassicaudatus*, *Chironomus*  
*crassinervis*, *Procladius*  
*crassipalpis*, *Parasarcophaga* (see *Sarcophaga crassipalpis*)  
*crassipalpis*, *Sarcophaga* (*Parasarcophaga*)  
*crassipes*, *Lepiselaga*  
*Crataerina hirsutinis*  
in USSR 1021  
on birds, in USSR 1021  
*Crataerina pallida*  
in UK 2696  
in dwellings, in Scotland 2696  
*Cratynius yunnanus*  
sp. nov., description of 3180  
in China 3180  
on *Hylomys suillus*, in Yunnan 3180  
*crawfordi*, *Anopheles*  
Creeks, Diptera in, effects of discharge patterns on 2118  
*crenobiium*, *Eusimulium* (see *Simulium crenobiium*)  
*crenobiium*, *Simulium* (*Eusimulium*)  
Creolin, with HCH 3349  
*crepuscularis*, *Culicoides*  
Cresol (see Phenol, methyl-)  
*criceti*, *Demodex*  
*Cricetulus*, *Amphipsylla qinghaiensis* on, in China 567  
*Cricetulus migratorius*, *Amphipsylla qinghaiensis* on, in China 567  
*Cricetus auratus* (see Hamster, golden)  
*Cricetus cricetus*, *Ricinus* spp. on, in Hungary 2012  
*Cricetopus*  
control of, traps for 2413  
in California 670  
in flood-control systems, in California 2413  
*Cricetopus bicinctus*  
control of, insecticides for 3346  
in USA 3346  
in flood-control channels, in California 3346  
*Cricetopus sylvestris*  
control of  
growth regulators for 56  
insecticides for 3346  
in USA 3346  
in USSR 56  
in flood-control channels, in California 3346  
in rice-fields, in Caucasus 56  
Crimean hemorrhagic fever virus (see Congo virus)  
*cristatus*, *Scarabaeus*  
*Crivellia* (see *Przhevalskiana*)  
*Crociodura*, *Schoutedenichia frici* on, in Africa 1660  
*Crociodura leucodon*  
*Peromyscopsylla bidentata* on, in Hungary 2027  
*Polyplax reclinata* on, in Poland 557  
*Crociodura occidentalis*, *Microtrombicula kikuyuensis* on, in Africa 1660  
*Crociodura russula*  
*Hystriochopsylla taipae* on, in Morocco 3183  
West Nile virus in, in Spain 2233  
*crotali*, *Porocephalus*  
*Crotalus atrox*, *Porocephalus crotali* on, development of 2500  
*Crotamiton* (N-ethyl-N-(2-methylphenyl)-2-butenamide)  
against, *Dermanyssus americanus*, on man 1670  
*Crotoxyphos* (1-phenylethyl (E)-3-[(dimethoxyphosphinyl)oxy]-2-butenate)  
against  
*Haematobia irritans*, on cattle 1915  
*Musca autumnalis*, on cattle 1915  
*M. domestica* 1893  
*Otodectes* spp., on fur bearers 728  
*O. cynotis*, on fox 728  
*Psoroptes* spp., on rabbit 728  
*Stomoxys nigra*, on cattle 203  
with dichlorvos  
against  
*Haematobia irritans*, on cattle 1915  
*Musca autumnalis*, on cattle 1915  
Crow, Japanese encephalitis, virus in, in India 573  
*Crozetia*, maxillary sensilla in 3309  
*crucians*, *Anopheles*  
Crustacea  
*Bacillus thuringiensis* in  
not pathogenic 3296  
pathogenicity of 2086  
in fresh water, effects of pyrethroids on 2157  
in rice-fields, in California 2093  
preyed on by, *Gambusia affinis*, in California 2093  
*Trichinella spiralis*, in, transmission of 746  
vision in, book 2004  
*cruzii*, *Anopheles*  
*crybda*, *Culex*  
*Cryptochironomus*, in California 2118  
*Cryptonyssus*, on bat, in Moldavia 1077  
*Cryptoses*, on sloth, in Americas 1632  
 $\beta$ -Cryptoxanthin (see  $\beta$ , $\beta$ -Caroten-3-ol, (3R)-)  
*csikii*, *Haematopota*  
*Ctenocephalides canis*  
antennae in, sensilla on 1517  
in India 2343, 2470  
in Nigeria 47  
in Tanzania 2030  
in UK 2872  
in USA 2302  
*Leptomonas ctenocephali* in  
attachment of 2866  
cysts of 2873  
on *Didelphis virginiana*, in Oregon 2302  
on dog, in England 2872  
on goat, effects on blood of 47  
on rodents, in Tanzania 2030  
on sheep, effects on blood of 47  
*Rickettsia conorii* in, in Karnataka 2343  
*Ctenocephalides felis*  
control of, insecticides for 2028, 2325  
development in  
effects of humidity on 3187  
effects of temperature on 3187  
*Hymenolepis diminuta* in, infectivity of 366  
in Jordan 365  
in UK 1139  
in USA 2028, 2302  
on cat  
hypersensitivity to 363  
in Jordan 365  
on *Didelphis virginiana*, in Oregon 2302  
on dog, hypersensitivity to 363  
*Rickettsia prowazekii* in, not transmitted 3066  
*Ctenocephalides felis felis*  
biology of 820  
control of 820  
in UK 2872  
on cat, in England 2872  
on dog, in England 2872  
on man, in central Europe 820  
*Ctenocephalides felis orientis* (see *C. orientis*)  
*Ctenocephalides orientis*  
chromosomes in 2581  
on man 2837  
*Ctenodactylidae*, *Caenopsylla* spp. on, in northern Africa 2335  
*Ctenopharyngodon idella*, aquatic weed  
control using 2345  
*Ctenophthalmus agyrtes*  
*Hepatoozon erhardovae* in, development of 2331  
hosts of, adaptations to 1042  
in Czechoslovakia 362  
in Hungary 2334  
in USSR 1042, 1046, 1049  
in *Citellus citellus* nests, in Czechoslovakia 362  
seasonal abundance of 362  
*Ctenophthalmus aprojectus*  
sp. nov., description of 568  
in China 568  
on small mammals, in Yunnan 568  
*Ctenophthalmus assimilis*  
*Hepatoozon erhardovae* in, development of 2331  
in Czechoslovakia 362  
in Hungary 2334  
in Poland 323  
in USSR 1049  
in *Citellus citellus* nests, in Czechoslovakia 362  
on *Clethrionomys glareolus*, in USSR 1049  
on *Mustela*, in Poland 323  
on rodents, removal by host of 2342  
seasonal abundance of 362  
*Ctenophthalmus bisocetodontatus*  
in USSR 1049  
on *Clethrionomys glareolus*, in USSR 1049  
*Ctenophthalmus calceatus*  
in Tanzania 2030  
on rodents, in Tanzania 2030  
*Ctenophthalmus congener secundus*  
in USSR 1060  
on *Mus musculus*, in Crimea 1060  
*Ctenophthalmus congeneroides*  
in USSR 3389  
on Rodentia, in Maritime Territory 3389  
*Ctenophthalmus orientalis*  
in Czechoslovakia 362  
in *Citellus citellus* nests, in Czechoslovakia 362  
seasonal abundance of 362  
*Ctenophthalmus pseudagyrtis pseudagyrtis*  
in USA 2304  
on *Rattus norvegicus*, in Wisconsin 2304  
*Ctenophthalmus secundus* (see *C. congener secundus*)  
*Ctenophthalmus teres*  
control of, insecticides for 2868  
development in  
effects of humidity on 1519  
effects of temperature on 1519  
in USSR 2868  
on Rodentia, in Caucasus 2868  
*Ctenophthalmus uncinatus*  
hosts of, adaptations to 1042  
in USSR 1042, 1046, 1049  
on rodents, removal by host of 2342  
*Ctenophyllus*, distribution of 2335  
*Ctenophyllus armatus*  
in USSR 3184  
on small mammals, in Siberia 3184  
Cuba  
*Centruroides* spp. in 3432  
*Culicidae* in 849  
on man 1764  
mosquito-borne diseases in 849  
*Scheloribates* spp. in, cestodes in 738  
Scorpiones in 745  
*Cubanochirus*  
descriptions of 1952  
on *Solenodon paradoxus*, in Dominican Republic 1952  
*Cubanochirus elongatus*  
descriptions of 1952  
on *Capromys melanurus* 1952  
on *Capromys prehensilis* 1952  
*Cubanochirus maximus*  
descriptions of 1952  
on *Solenodon cubanus* 1952  
*cubanus*, *Capromylichus*  
*cubitalis*, *Culicoides* (see *C. kibunensis*)  
*Cuclogaster occidentalis*  
in Nigeria 2013, 2569  
on fowl, in Nigeria 2013  
on guineafowl, in Nigeria 2569  
*Culex*  
arboviruses in, transmission of 1826



**Culex** *contd.*

- Bacillus sphaericus* in, in Pondicherry 2622
- control of  
   biological 1537, 2346  
   genetic 3140  
   insecticides for 2057, 2792
- electrophoresis for studying 70
- Flanders virus in, in Indiana 2900
- fungi in, in USSR 1019
- in Angola 2638
- in Azerbaijan 852
- in Canada 1533
- in Canary Islands 2071
- in China 2053
- in Cuba 849
- in Finland 2957
- in Hokkaido 603
- in Karnataka 2470
- in Nigeria 602
- in Quebec 2881
- in Soviet Maritime Territory 3264
- in Spain 2941
- in USSR 1548
- in tree holes, in Kenya 2876
- in water containers, in Nigeria 2895
- in woodland, vertical distribution of 1212
- Japanese encephalitis, virus in, in China 1827
- larvae of, distinguishing instars of 2611
- on man, no antibodies to 562
- on rabbit, antibodies to 562
- parasitised by, water mites, in Quebec 2354
- research on, in UK 840
- Saint Louis encephalitis, virus in, in Brazil 2898
- seasonal abundance of 2957
- taxonomy of 2903
- tracheoles in 2835
- Culex adamesi**  
   sp. nov., description of 584  
   biology of 584  
   in Brazil 584  
   in Colombia 584  
   in Ecuador 584  
   in French Guiana 584  
   in Panama 584
- Culex annulirostris**  
   development in, effects of temperature on 2632
- Eperythrozoon ovis* in, transmission of 2129
- in Australia 1214, 1772
- in Fiji 412
- seasonal abundance of 1214
- surveillance for 1772
- Culex annulus** (see *C. vishnui*)
- Culex apicalis**, in USA 2083
- Culex australicus**  
   in Australia 1214  
   seasonal abundance of 1214
- Culex bihaicolus**  
   in Venezuela 1222, 2362  
   in *Heliconia aurea* bracts, in Venezuela 1222  
   in *Heliconia aurea* floral bracts, in Venezuela 2362
- Culex bitaeniorhynchus**  
   biology of 3275  
   in China 2349  
   in India 573, 3275  
   in Indonesia 1777  
   in Philippines 3221  
   Japanese encephalitis, virus in, in Philippines 3221  
   on fowl, in India 573
- Culex corniger**  
   in Venezuela 2643  
   in cemetery vases, in Venezuela 2643
- Culex coronator**  
   in Brazil 2898  
   Saint Louis encephalitis, virus in, in Brazil 2898
- Culex crybda**  
   descriptions of 583  
   taxonomy of  
     characters distinguishing *C. adamesi* and 584  
     distinct from *C. epanastasis* 583
- Culex declarator**  
   in Brazil 2898

**Culex declarator** *contd.*

- Saint Louis encephalitis, virus in, in Brazil 2898
- Culex epanastasis**  
   descriptions of 583  
   taxonomy of  
     characters distinguishing *C. adamesi* and 584  
     *Culex crybda* distinct from 583
- Culex erythrorhax**  
   biology of 3241  
   in USA 3241
- Culex fatigans** (see *C. quinquefasciatus*)
- Culex fuscocephalus**, in China 2349
- Culex gelidus**, in Bangladesh 1562
- Culex johni**  
   sp. nov., description of 579  
   in Venezuela 579  
   in streams, in Venezuela 579
- Culex jubifer**, taxonomy of, characters distinguishing *C. simulator* and 109
- Culex machadoi**  
   descriptions of 2049  
   in Brazil 2049
- Culex mamillifer**, in China 2053
- Culex martinii**  
   in USSR 77  
   siphon index of, variation with latitude of 77
- Culex modestus**  
   in USSR 2594  
   phenology of 2594
- Culex molestus**  
   autogeny in 1240  
   chikungunya virus in, replication of 85  
   control of  
     biological 1228  
     detergents for 75  
     growth regulators for 1011  
     insecticides for 75, 401, 828  
   dinoseb in, toxicity of 3289  
   egg-hatch in, effects of temperature on 2050  
   fungi in, in Ukraine 1757  
   in Azores 1240  
   in Japan 2050  
   in Madeira 1240  
   in Romania 75  
   in USSR 1757  
   in basements, in Romania 75  
   mating flight in 822  
   oviposition attractants for 1759  
   oviposition in, effects of temperature on 2050  
   *Romanomermis culicivorax* in, development of 2934  
   stenogamy in 1240
- Culex nigripalpus**  
   control of  
     growth regulators for 371  
     monolayers for 373  
   in Jamaica 845  
   in USA 371, 373, 837, 2609  
   in sewage systems, in Florida 373  
   ovarian development in 2609  
   ovaries in, proteins in 91  
   *Plasmodium hermani* in, in Florida 837  
   Saint Louis encephalitis, virus in, in Jamaica 845
- Culex ocosa**  
   enzymes in 2923  
   in Panama 2923  
   on man, in Panama 2923  
   taxonomy of, characters distinguishing *C. panocossa* and 2923
- Culex opisthopus**, taxonomy of, synonym of *C. taeniopus* 583
- Culex orientalis**  
   breeding places of 603, 3271  
   control of, biological 1728  
   in Japan 603, 3271  
   in rice-fields, in Hokkaido 603, 3271
- Culex panocossa**  
   enzymes in 2923  
   in Panama 2923  
   on man, in Panama 2923  
   taxonomy of, characters distinguishing *C. ocosa* and 2923
- Culex pedroi**  
   sp. nov., description of 583  
   distribution of 583  
   in Panama 583

**Culex pedroi** *contd.*

- taxonomy of, characters distinguishing *C. adamesi* and 584
- Culex peus**  
   control of, biological 2084  
   in USA 2081, 2083
- Culex pipiens**  
   *Bacillus sphaericus* in, pathogenicity of 1216  
   breeding places of 603  
   chlorpyrifos resistance in 3266  
   in Italy 772  
   chymotrypsin inhibitor in 2075
- Coelomomyces iliensis* in, development of infection with 1065
- control of 2954, 3265  
   biological 1249, 1711, 1728, 1797, 2086, 3297, 3298  
   growth regulators for 1710, 1754, 1988, 3436  
   insecticides for 761, 772, 1822, 2040, 2886, 2920
- Culiciniomyces* spp. in, pathogenicity of 1729
- cytoplasmic polyhedrosis virus in, in Ukraine 1025
- Dirofilaria immitis* in, development of 378
- enzymes in 369, 774, 1227, 1571, 2075, 2105, 2940
- fecundity in, effects of artificial selection on 1211
- feeding behaviour in, role of JH in 1770
- Flanders virus in, in New York State 3246
- flight activity in, fatty-acid requirements for 3214
- in Canada 1243, 2060, 2064, 2881
- in Egypt 2135, 3293
- in France 2886, 2954, 3199, 3265, 3297
- in Italy 772, 2128
- in Japan 603
- in South Africa 84
- in South Korea 2122
- in USA 1789, 1790, 1791, 2040, 2043, 2074, 2083, 2914, 3212, 3246
- in USSR 1024, 1025, 1079, 2346, 2594, 3263
- in catch basins, in Indiana 1791
- in drains, in France 3297
- in ponds, effects of aquatic plants on 1243
- in tyres, in Hokkaido 603
- insect growth regulators in, effects of 1754
- insecticide resistance in  
   detecting of 2105  
   in Utah 3212
- larval diet of 3263
- monitoring of 2064
- nutrition of 3214
- on birds, in South Africa 84
- on man  
   in South Africa 84  
   in Ukraine 1024
- overwintering in 2914
- oviposition deterrents for, plant extracts as 2618
- oviposition in, effects of temperature on 2619
- pathogens of, predators of 3244
- phenology of 2594
- population dynamics of 2593
- predators of, effects of aquatic plants on 1243
- preyed on by, *Gambusia* spp. 2346
- Rift Valley fever virus in  
   in Egypt 2135  
   transmission of 2135
- Romanomermis culicivorax* in 2089
- effects of 1229
- effects on hemolymph proteins of 1227
- infectivity of, effects of culture age on 2932
- Saint Louis encephalitis virus in  
   not transmitted transovarially 1784  
   transmission of, strain differences in 396
- seasonal abundance of 2060, 2122
- siphonal index in, effects of artificial selection on 1211

**Culex pipiens contd.**

- temephos resistance in, in Italy 772
- traps for 2064
- Trichomyctes in, in Nebraska 2043
- Wuchereria bancrofti* in, in Egypt 3293
- group of
  - anautogenous races of, wing characters for identifying 2607
  - autogenous races of, wing characters for identifying 2607
  - breeding places of 832
  - chromosomes in 2646
  - control of 2370
    - in urban areas 832
  - enzymes in 2035
  - genitalia in 111
    - in Egypt 2646
    - in France 832
    - in Japan 111
    - in Tennessee 2074, 2944
    - in Thailand 2945
  - insecticide resistance in 825, 2366
  - sanitation and 2370
  - taxonomy of 2944
  - western equine encephalitis, virus in, in California 2081

**Culex pipiens autogenicus** (see *C. molestus*)**Culex pipiens fatigans** (see *C. quinquefasciatus*)**Culex pipiens molestus** (see *C. molestus*)

- Culex pipiens pallens**
  - control of, insecticides for 1437, 1441, 2604, 2796
  - furocoumarins in, effects of 317
  - genitalia in 111
  - hosts of 2907, 2908
    - in Japan 111, 2907, 2908
    - in Thailand 2945
  - on birds, in Honshu 2907, 2908
  - on cat, in Honshu 2908
  - on cattle, in Honshu 2908
  - on dog, in Honshu 2908
  - on man, in Honshu 2908
  - on mouse, in Honshu 2908
  - on pig, in Honshu 2908
  - on snakes, in Honshu 2908
  - ovarian development in, induction of 407
  - trichlorophen resistance in, and cross-resistance 2604

**Culex pipiens pipiens**

- Asocystis culicis* in, in Ukraine 2590
- Diffingeria spinosa* in, in USSR 1890
- egg-rafts of, assembly of 2953
- eggs of, surface properties of 2953
- genitalia in 111
  - in Japan 111
  - in USSR 1890, 2590
- mating flight in 822
- Metarhizium anisopliae* in, pathogenicity of 596

**Culex pipiens quinquefasciatus** (see *C. quinquefasciatus*)**Culex pseudovishnui**

- in India 573
- in Japan 1217
- on fowl, in India 573
- on man, in Ryukyu Islands 1217

**Culex quinquefasciatus**

- allergens of 2132
- amino acids in, not affected by polluted water 3273
- aminotransferases in, insecticide inhibition of 2352
- Apeu virus in, infectivity of 1524
- Bacillus sphaericus* in
  - ingestion of, measuring of 2892
  - pathogenicity of, effects of larval behaviour on 3260
- B. thuringiensis* in, pathogenicity of, not affected by insecticide resistance 2924
- biology of 398, 3241
- breeding places of 602, 2600, 2623
- chlorpyrifos resistance in, in Tanzania 2928
- control of 398
  - biological 118, 1572, 1812, 1829, 2084, 2375, 2622, 2641, 2916, 2924, 3136
  - genetic 2048
  - growth regulators for 374, 2113
  - insecticides for 78, 374, 608, 1561, 1714, 2056, 2106, 2107, 2111, 2263, 2265, 2353, 2366, 2504, 2506, 2640, 2913, 3216, 3269
- control of *contd.*
  - insecticides for *contd.*
    - rotation of 2110
    - monolayers for 373
    - mucilaginous seeds for 2601
    - sanitation for 412
    - traps for 2928
  - cytoplasmic incompatibility in 2048
  - DDT resistance in, in Pondicherry 2640
  - dieldrin resistance in, in Pondicherry 2640
  - dyes in, light-dependent toxicity of 2367
  - eclosion in, rhythm of 1600
  - egg-hatch in, effects of temperature on 2050
  - enzymes in 1221, 2104, 2352, 2366, 2625, 2877, 3281
  - esterase in, genetics of 3281
  - fecundity in, effects of physiological age on 606
  - feeding behaviour in 2383
    - role of JH in 1770
  - flight activity in 67
    - rhythm of 406, 858
  - genitalia in 111
  - habitats of 1796
  - in Brazil 2383, 2655, 2656, 2657, 3224
  - in China 2349
  - in Costa Rica 2138
  - in Fiji 412
  - in India 102, 606, 608, 2599, 2600, 2623, 2640, 2888, 3223
  - in Japan 111, 2050
  - in Kenya 97
  - in Nigeria 602
  - in Papua New Guinea 833
  - in Seychelles 1825
  - in South Africa 84
  - in Sri Lanka 1206
  - in Taiwan 2032
  - in Tanzania 2048, 2366, 2928
  - in Thailand 2132, 2945
  - in Tokelau Islands 1833
  - in Upper Volta 644, 1714
  - in USA 373, 374, 1814, 2074, 2113, 2913, 2914, 2916, 3241
  - in USA (Hawaii) 1796
  - in Venezuela 2643
  - in animal waste lagoons, effects of organic pollution on 1814
  - in cassava fermentation pools, in Nigeria 602
  - in cemetery vases
    - in California 2916
    - in Venezuela 2643
  - in cess pits, in Tanzania 2928
  - in dwellings, in Brazil 2383
  - in pig waste, in North Carolina 374
  - in pit latrines, in Tanzania 2928
  - in sewage systems, in Florida 373
  - in storm drains, in California 2113
  - insecticide resistance in 2381
    - breaking down of 2110
    - evaluating tests for 2913
    - genetics of 1221, 3281
    - in Tanzania 2366
    - role of esterases in 2877
  - Itaqui virus in, infectivity of 1524
  - Japanese encephalitis, virus in, in Taiwan 2032
  - larval development in, head-capsule widths during 1806
  - malathion in, tolerance of 2913
  - malathion resistance in, development of 3269
  - Marituba virus in, infectivity of 1524
  - marking of, radiophosphorus for 3294
  - mating in 1766
  - mortality in 2383
  - Murutucu virus in, infectivity of 1524
  - Nodamura virus in, not pathogenic 1773
  - on man
    - hypersensitivity to 2132
    - in Andhra Pradesh 2599
    - in Brazil 2383, 2655, 2656, 2657
  - Oriboca virus in, infectivity of 1524
  - overwintering in 2914
  - oviposition in, effects of temperature on 2050
  - oviposition pheromones in 2381
  - oviposition repellents for 1209

**Culex quinquefasciatus contd.**

- permethrin resistance in
  - and cross-resistance 2353
  - penetration rate not involved in 392
- population density of, estimating of 2116
- preyed on by
  - Gambusia affinis* 3213
  - Macropodus cupanus* 2351
  - Poecilia reticulata* 3213
- Rift Valley fever, virus in, transmission of 2139
- Romanomermis nielsenii* in, development of 1817
- rose eye mutant of 595
- Saint Louis encephalitis virus in
  - not transmitted transovarially 1784
  - transmission of, strain differences in 396
- seasonal abundance of 2383
- sex ratio in 606
- sexual dimorphism in, in larvae 1806
- solar eclipse not affecting 3223
- sterilisation of, chemosterilants for 100
- strains of 1206
- temephos resistance in
  - genetics of 2104
  - in Uttar Pradesh 608
  - mechanisms of 2104
- thiotepa in, duration of sterilisation by 100
- thyroxine in, effects on development of 3256
- traps for 97
- Vavraia culicis* in, infectivity of 2891
- Wuchereria bancrofti* in
  - in Andhra Pradesh 2599
  - in Bihar 2888
  - infectivity of 1205
    - strain differences in 1795
  - pathogenicity of 121
  - permeability of gut to 120
  - refractoriness to 2048
  - transmission of 2138
  - uptake from man of 2589

**Culex quinquefasciatus contd.**

- Culex restuans**
  - control of, insecticides for 1822
  - in Canada 2060, 2064
  - in USA 2043, 2901, 3211
  - monitoring of 2064
  - oviposition in, substrate preferences for 2901
- Romanomermis nielsenii* in, development of 1817
- seasonal abundance of 2060
- traps for 2064
- Trichomyctes in, in Nebraska 2043
- Culex rubinotus**, Rift Valley fever, virus in, infectivity of 2139
- Culex salinarius**
  - fecundity in, relation of physiological age and 1232
  - host-seeking behaviour in 3292
  - in USA 2910, 3211, 3292
  - in salt marshes, in South Carolina 2910
  - overwintering in 3292
  - seasonal abundance of 3292
  - Vavraia culicis* in, infectivity of 2891
- Culex scanloni*, in China 2053
- Culex simpsoni*, in Seychelles 1825
- Culex simulator**
  - descriptions of 109
  - in Panama 109
  - in Trinidad and Tobago 109
  - taxonomy of, characters distinguishing *C. jubifer* and 109
- Culex sitiens**
  - control of, insecticides for 2640
  - in Australia 106
  - in China 2349
  - in India 2640
  - in Papua New Guinea 833
  - in coral cays, in Queensland 106
- Culex taeniopus**
  - descriptions of 583
  - taxonomy of
- Culex opisthopus* as synonym of 583
- C. pedroi* misidentified as, in Panama 583
- Culex tarsalis**
  - arboviruses in, in California 2081
  - autogeny in 386



**Culex tarsalis** *contd.*

- Bacillus thuringiensis* in, pathogenicity of 2501
- biology of 3241
- California encephalitis, virus in, effects on CO<sub>2</sub> susceptibility of 615
- calorie content of 2091
- carmine eye mutant of, genetic fitness of 3239
- control of 3203
  - biological 2084, 2087, 2088
  - genetic 380
  - model 2102
  - habitat modification for 2345
  - insecticides for 78, 1801, 2101, 2111
  - sterile-insect release for 2101
  - water management for 1801
- dispersal of 2119
- enzymes in 122, 2131, 3258
- gonads in, effects of temperature on 1233
- in Canada 384, 1809
- in USA 380, 381, 590, 1790, 1801, 2043, 2080, 2081, 2083, 2084, 2087, 2088, 2093, 2101, 2111, 2115, 2119, 2345, 3203, 3204, 3212, 3241
- in irrigated pastures, in California 2088
- in irrigation canals, in California 2345
- in ponds, plant associations of 384
- in rice-fields
  - effects of crop rotation on 2115
  - effects of irrigation water source on 2115
  - in California 2093, 3203
  - in salt marshes, in California 2087
- insecticide resistance in
  - in California 1801
  - in Utah 3212
- marking of, fluorescent dusts for 2103
- mating competitiveness in 3239
- in genetic control strains 2099
- oviposition repellents for 1209
- preyed on by
  - Gambusia affinis* 2092
  - in California 2093
  - Mesostoma* spp., in California 2115
- Saint Louis encephalitis virus in
  - in California 3241
  - not transmitted transovarially 1784
- sterilisation of,  $\gamma$ -irradiation for 2101
- surveillance for 2080
- traps for 590
- Trichomyctes in, in Nebraska 2043
- Vavraia culicis* in, infectivity of 2891
- western equine encephalitis virus in
  - in California 3241
  - in Manitoba 1809
  - transmission of, barriers to 2626

**Culex territans**

- in Canada 384
- in China 2053
- in USA 1531
- in USSR 77, 1024
- in ponds, plant associations of 384
- on amphibians, in Ukraine 1024
- on reptiles, in Ukraine 1024
- siphon index of, variation with latitude of 77
- Strelkovimermis peterseni* in, not infective 1531

**Culex theileri**

- in South Africa 84, 2139
- on birds, in South Africa 84
- on man, in South Africa 84
- on sheep, in South Africa 84
- Rift Valley fever, virus in, in South Africa 2139

**Culex torrentium**, in China 2053**Culex tritaeniorhynchus**

- adults of
  - glyceride accumulation in 3257
  - weight increases in 3257
- biology of 3275
- chromosomes in 2377
- control of
  - agricultural pesticides for 1226
  - biological 1228, 1728
  - insecticides for 99, 2640
  - traps for 99
- Culicinympes* spp. in, pathogenicity of 1729

**Culex tritaeniorhynchus** *contd.*

- dieldrin resistance in, in Pondicherry 2640
  - Getah virus in, in Honshu 3286
  - hosts of 2907
  - in Bangladesh 1562
  - in China 1827, 2349
  - in India 573, 1557, 2640, 3275
  - in Japan 99, 1217, 1226, 2907, 3286
  - in Philippines 83, 3221
  - in South Korea 2122
  - in Taiwan 2032
  - in rice-fields
    - effects of agricultural pesticides on 1226
    - mortality of 99
  - Japanese encephalitis virus in
    - in China 1827
    - in Honshu 3286
    - in Philippines 83, 3221
    - in Taiwan 2032
    - infectivity of, strain differences in 2951
    - isolating of 2950
    - transovarial transmission of 847
  - maroon eye mutant of 2377
  - mating competitiveness in, effects of chromosome aberrations on 1557
  - on fowl, in India 573
  - on man, in Ryukyu Islands 1217
  - on pig, in Honshu 2907
  - predators of
    - effects of agricultural pesticides on 1226
    - in Kyushu 99
  - rearing of, techniques for 3255
  - seasonal abundance of 2122
  - Sindbis virus in, in Taiwan 2032
  - West Nile virus in
    - infectivity of
      - effects of adult age on 3233
      - effects of rearing conditions on 3233
- Culex tritaeniorhynchus summorosus** (see *C. tritaeniorhynchus*)
- Culex univittatus**
- in South Africa 84
  - on birds, in South Africa 84
  - on man, in South Africa 84
  - Rift Valley fever, virus in, transmission of 2139
- Culex vagans**
- breeding places of 3271
  - control of, biological 1728
- Culicinympes* spp. in, pathogenicity of 1729
- in China 2349
  - in Japan 3271
  - in rice-fields, in Hokkaido 3271
- Culex vishnui**
- biology of 3275
  - Coelomomyces omorii* in, in Taiwan 2031
  - in China 2349
  - in India 2620, 3275, 3276
  - in Indonesia 1777
  - in Philippines 83
  - in Taiwan 2031, 2032
  - Japanese encephalitis virus in
    - in Philippines 83
    - in Taiwan 2032
    - in West Bengal 2620
  - West Nile virus in, in Andhra Pradesh 3276
- Culex whitmorei**
- biology of 3275
  - control of, insecticides for 2640
  - DDT resistance in, in Pondicherry 2640
  - dieldrin resistance in, in Pondicherry 2640
  - in India 2640, 3275, 3276
  - Japanese encephalitis, virus in, in Andhra Pradesh 3276
- Culicidae** 1479
- arboviruses in
    - in Brazil 2897
    - in French Guiana 1154
    - in Manitoba 1809
    - in New South Wales 2033
    - in Peru 1828
  - Bacillus sphaericus* in
    - in Romania 1537

**Culicidae** *contd.*

- Bacillus sphaericus* in *contd.*
  - pathogenicity of 2350
- B. thuringiensis* in, in Romania 1537
- biology of 3215, 3284
- bites by 3215
- blood-feeding in, evolution of 1170
- blood-feeding of, membranes for 3249
- cell cultures from, review 1468
- chromosomes in 1995
- polymorphism of 1478
- collecting of 2597
- control of 6, 2120, 3202, 3204, 3215, 3284
  - biological 1038, 1207, 1522, 1535, 1538, 1539, 1543, 1553, 1707, 1798, 2085, 2086, 2088, 2094, 2381, 2610, 2955, 3266, 3272, 3296
  - economics of 2095
  - genetic, review 3140
  - growth regulators for 3209
  - in rural areas 1712
  - in tropics 1706
  - in urban areas 832, 1712
  - insecticides for 370, 383, 1012, 1709, 1713, 1802, 1803, 2361, 2508, 2536, 2829, 2952, 2955, 3209, 3266
  - integrated 3203
  - manual 3205
  - models 574
  - non-target effects of 1235, 1530, 2114, 3296
  - optimal spray droplet sizes for 1982
  - water management for 3207, 3208
- Dermatophilus congolensis* in,
  - transmission of 777
- diapause in, review 1191
- diseases transmitted by 3284
- ecology of, in Holarctic region 1219
- eggs of, adaptive strategies related to 1824
- esterase in, determination of 3281
- feeding behaviour in 1028
- effects of temperature on 2283
- Filarioidea in, transmission of 3225
- fungi in 2837
  - in Ukraine 1025
- helminths in, in Uzbekistan 316
- host-seeking in, role of carbon dioxide in, review 1792
- in Andhra Pradesh 3275
- in Angola 2638
- in Argentina 400
- in Belorussia 411, 841
- in California 2118
- in Canada, book 1533
- in Canary Islands 2071, 2941
- in Colorado 3204
- in Cuba 849
- in French Guiana 2358
- in Indiana 1789, 1790
- in Indonesia 1777
- in Kenya 1551
- in Kinmen Islands 2349
- in Kurile Islands 1760
- in Mariana Islands 2117
- in Michigan 1807
- in Missouri 3211
- in Nagaland 2623
- in Nearctic region, book 2587
- in New York State 2933
- in Nigeria 2003
- in Ontario 2060
- in Philippines 856
- in Quebec 672, 3290
- in Sakhalin Island 1760
- in South Africa 2139
- in South Korea 2122
- in Spain 2941
- in Thailand 2805
- in Trinidad and Tobago 614
- in Ukraine 1024, 1079
- in Venezuela 2061
- in Victoria 1214
- in West Virginia 1805
- in caribou hoofprints, in Quebec 2063
- in coral cays, in Queensland 106
- in dairy-waste lagoons, in California 2120
- in *Pandanus rabaiensis* axils, in Kenya 54
- in pools, productivity of 2958

**Culicidae contd.**

- insect growth regulators in, determining susceptibility to 2890
  - insecticide bioassay using 1455
  - insecticide resistance in 534, 1803
    - genetics of 2887
    - overcoming of 2887
  - insecticide susceptibility in, determination of 2645, 3219, 3220
  - irrigation with municipal sewage as affecting 2368
  - Mermithidae in 1134
  - natural enemies of, in USSR 1038
  - nematodes in 2837
  - Nosema* spp. in 3136
  - on cattle
    - effects on productivity of 1521
    - in Alberta 1287
  - on man
    - in Panama 2283
    - prurigo caused by 1764
  - on sheep, in Idaho 3282
  - oviposition in, adaptive strategies related to 1824
  - palpal sensilla in 3309
  - parasitised by
    - Arrenurus* spp., in West Germany 468
    - Hydrodromidae, in New York State 3254
  - pathogens of
    - bibliography 2517
    - review 1783
  - phagostimulants for 1471
  - physiological age of, determining of 2874
  - physiological aging of, 'gonotrophic aging' more appropriate term for 2137
  - population dynamics of 2078
  - predators of 2359
  - preyed on by
    - Aphanius dispar* 2642
    - Chaoborus cooki*, in Alberta 2931
    - fish 1543
      - in New Jersey 3207
    - Mesostoma* spp., in Nigeria 3229
  - pupal seta 13-CT in 2948
  - research on, in UK 840, 2616, 2633
  - sampling of 531, 2875
  - size sorting device for 2126
  - taxonomy of, literature on characters for 210
  - temperature sensors in 389
  - traps for 97, 3234, 3235, 3252, 3283
- culicifacies, Anopheles**
- Culicimermis schakhovii***  
in, *Aedes* spp., in Ukraine 1025
- Culicinae**  
control of 2525
- Culicoides**  
in Brazil 2072
- Culicoides**  
insecticide resistance in 2286
- Culicoides**  
on cattle, in Wyoming 2525
- Culicoides**  
predators of, in Nigeria 1113
- Culicinomyces**  
in  
*Aedes* spp., pathogenicity of 1729
- Culicinomyces clavosporus**  
against  
*Aedes epactius* 1829
- Culicinomyces**  
*Culex quinquefasciatus* 1829
- Culicinomyces**  
CMI description of 62
- Culicinomyces**  
hosts of 1829
- Culicinomyces**  
temperature requirements of 1829
- Culicoides**  
animal diseases transmitted by 779
- Culicoides**  
antibiotics in, toxicity of 1056
- Culicoides**  
biology of 130
- Culicoides**  
bluetongue virus in, in Australia 866
- Culicoides**  
conference on 127
- Culicoides**  
control of, insecticides for, testing of 1842
- Culicoides**  
descriptions of 131
- Culicoides**  
in Australia 2652
- Culicoides**  
in Colombia 2141
- Culicoides**  
in Florida 131
- Culicoides**  
in Morocco 3304
- Culicoides**  
in Queensland 2143
- Culicoides**  
in South Africa 84
- Culicoides**  
in Transbaikalia 1030
- Culicoides**  
in USSR 2647
- Culicoides**  
in decomposing *Myriophyllum*, in North Carolina 2723
- Culicoides**  
in forests, in Belorussia 1058

**Culicoides contd.**

- on cattle, in Kenya 1551
  - on man, in Colombia 2156
  - preyed on by, *Elaphrus cupreus*, in France 3299
  - Rift Valley fever, virus in, in Kenya 1551
  - viruses in, transmission of 2832
- Culicoides abchazicus***  
genitalia in 416
- Culicoides abchazicus***  
taxonomy of, characters distinguishing *C. filicinus* and 416
- Culicoides austeni*, *Dipetalonema perstans***  
in, transmission of 861
- Culicoides barbosai***  
control of, insecticides for 626
- Culicoides barbosai***  
in Cayman Islands 626
- Culicoides biguttatus***  
host-seeking in 417
- Culicoides biguttatus***  
in USA 417
- Culicoides biguttatus***  
on livestock, in New York State 417
- Culicoides brevitarsis***  
Akabane virus in, in Queensland 866
- Culicoides brevitarsis***  
in Australia 862, 866, 1253, 2142, 2143, 2659, 3303
- Culicoides brevitarsis***  
in Fiji 2659
- Culicoides brevitarsis***  
parasitised by  
*Myianoetus dycei*  
in Australia 2659
- Culicoides brevitarsis***  
in Fiji 2659
- Culicoides brevitarsis***  
Peaton virus in  
in New South Wales 862
- Culicoides brevitarsis***  
in Queensland 1253
- Culicoides brevitarsis***  
seasonal abundance of 2143
- Culicoides brevitarsis***  
Tibrogargan virus in, in Queensland 3303
- Culicoides brevitarsis***  
Tinaroo virus in, in Queensland 862
- Culicoides brevitarsis***  
traps for 2143
- Culicoides caprilesi***  
in Colombia 2156
- Culicoides caprilesi***  
*Mansonella ozzardi* in, in Colombia 2156
- Culicoides caprilesi***  
on man, in Colombia 2156
- Culicoides cataneii*, in Yugoslavia 414**
- Culicoides circumscriptus***  
in France 1251
- Culicoides circumscriptus***  
in Morocco 1251
- Culicoides circumscriptus***  
in Tunisia 1251
- Culicoides circumscriptus***  
in USSR 1024
- Culicoides circumscriptus***  
in Yugoslavia 414
- Culicoides circumscriptus***  
on birds, in Ukraine 1024
- Culicoides circumscriptus***  
polymorphism in 1251
- Culicoides circumscriptus***  
taxonomy of, *Culicoides kirovabadicus* as synonym of 1251
- Culicoides clastrii***  
breeding places of 1574
- Culicoides clastrii***  
in France 1574
- Culicoides clastrii***  
in Yugoslavia 414
- Culicoides crepuscularis***  
flight activity in 2384
- Culicoides crepuscularis***  
in Canada 864
- Culicoides crepuscularis***  
in USA 2384
- Culicoides crepuscularis***  
in *Agelaius phoeniceus* nests, in Manitoba 864
- Culicoides crepuscularis***  
rearing of, techniques for 628
- Culicoides crepuscularis***  
seasonal abundance of 2384
- Culicoides cubitalis* (see *C. kibunensis*)**
- Culicoides dendrophilus*, in China 2649**
- Culicoides dobyi***  
in USSR 1030
- Culicoides dobyi***  
seasonal abundance of 1030
- Culicoides dubius*, in China 2649**
- Culicoides dzhabarovi*, in Yugoslavia 414**
- Culicoides fagineus***  
in Spain 129
- Culicoides fagineus***  
in tree holes, in Spain 129
- Culicoides fascipennis***  
in Yugoslavia 414
- Culicoides fascipennis***  
olfactory system in, evolution of 3132
- Culicoides filicinus***  
genitalia in 416
- Culicoides filicinus***  
taxonomy of, characters distinguishing *C. abchazicus* and 416
- Culicoides florencae***  
descriptions of 2141
- Culicoides florencae***  
in Colombia 2141
- Culicoides furens***  
control of, insecticides for 626
- Culicoides furens***  
in Cayman Islands 626
- Culicoides gejelensis*, in Yugoslavia 414**
- Culicoides grahamii***  
*Dipetalonema perstans* in, transmission of 861
- Culicoides grahamii***  
in Gabon 861
- Culicoides grisescens*, in USSR 2647**
- Culicoides grisescens flavus***  
ssp. nov., description of 2648
- Culicoides grisescens flavus***  
in USSR 2648
- Culicoides grisescens grisescens*, in USSR 2648**
- Culicoides gutsevichi***  
in USSR 1030
- Culicoides gutsevichi***  
on livestock, in Transbaikalia 1030
- Culicoides gutsevichi***  
on man, in Transbaikalia 1030
- Culicoides haranti***  
in Spain 129
- Culicoides haranti***  
in tree holes, in Spain 129
- Culicoides helveticus***  
in USSR 1030
- Culicoides helveticus***  
seasonal abundance of 1030
- Culicoides hieroglyphicus***  
flight activity in 2384
- Culicoides hieroglyphicus***  
in USA 2384
- Culicoides hieroglyphicus***  
seasonal abundance of 2384
- Culicoides inornatipennis*, *Dipetalonema perstans* in, transmission of 861**
- Culicoides insinuatus*, *Mansonella ozzardi***  
in, not developing 1580
- Culicoides kibunensis***  
breeding places of 1574
- Culicoides kibunensis***  
in France 1574
- Culicoides kibunensis***  
in Yugoslavia 414
- Culicoides kingi***  
in Sudan 1841
- Culicoides kingi***  
*Onchocerca gutturosa* in, in Sudan 1841
- Culicoides kirovabadicus*, taxonomy of, synonym of *C. circumscriptus* 1251**
- Culicoides longipennis*, in Yugoslavia 414**
- Culicoides marginalis***  
descriptions of 863
- Culicoides marginalis***  
in Australia 863
- Culicoides marksii*, *Onchocerca* spp. in, transmission of 2836**
- Culicoides marmoratus***  
in Australia 2143
- Culicoides marmoratus***  
seasonal abundance of 2143
- Culicoides marmoratus***  
traps for 2143
- Culicoides melleus*, sperm transfer in 2963, 2964**
- Culicoides mississippiensis***  
control of, insecticides for 1842
- Culicoides mississippiensis***  
in USA 1842
- Culicoides molestus***  
control of, insecticides for 3302
- Culicoides molestus***  
in Australia 3302
- Culicoides musilator***  
breeding places of 1574
- Culicoides musilator***  
in France 1574
- Culicoides musilator***  
in Yugoslavia 414
- Culicoides nivus***  
in South Africa 84
- Culicoides nivus***  
on birds, in South Africa 84
- Culicoides nubeculosus***  
bluetongue virus in  
infectivity of 2650
- Culicoides nubeculosus***  
replication of 630
- Eufilaria bartlettiae* in, development of 1573**
- E. delicata* in, development of 1573**
- E. delicata* in, development of 1573**  
in USSR 1024
- E. delicata* in, development of 1573**  
mating in 2144
- E. delicata* in, development of 1573**  
on cattle, in Ukraine 1024
- Onchocerca cervicalis* in  
infectivity of 2650**
- Onchocerca cervicalis* in  
permitting replication of bluetongue virus 630**
- O. gutturosa* in, transmission of 128**
- O. gutturosa* in, transmission of 128**  
sex pheromone of, effects of blood-meal on production of 631
- O. gutturosa* in, transmission of 128**  
sterilisation of, chemosterilants for 3306
- Culicoides obsoletus***  
host-seeking in 417
- Culicoides obsoletus***  
in USA 417
- Culicoides obsoletus***  
in USSR 1024, 1030
- Culicoides obsoletus***  
on birds, in Ukraine 1024
- Culicoides obsoletus***  
on livestock, in New York State 417
- Culicoides obsoletus***  
seasonal abundance of 1030
- Culicoides occidentalis***  
aggregation in 2385
- Culicoides occidentalis***  
control of  
biological 2385
- Culicoides occidentalis***  
growth regulators for 2385
- Culicoides occidentalis***  
insecticides for 2385
- Culicoides occidentalis***  
in USA 2385
- Culicoides occidentalis***  
on man, in California 2385
- Culicoides odibilis***  
breeding places of 1574



- Culicoides odibilis* *contd.*  
in France 1574  
in USSR 1024  
in Yugoslavia 414  
on birds, in Ukraine 1024
- Culicoides onderstepoortensis*, in South Africa 84
- Culicoides ornatus*  
descriptions of 863  
in Australia 863
- Culicoides ovyheensis*  
in USA 3282  
on sheep, in Idaho 3282
- Culicoides palmerae*  
flight activity in 2384  
in USA 2384  
seasonal abundance of 2384
- Culicoides pancensis*  
sp. nov., description of 2141  
in Colombia 2141
- Culicoides paraensis*  
biology of 2657  
in Brazil 2655, 2656, 2657, 3224  
on man, in Brazil 2655, 2656, 2657  
Oropouche virus in  
in Brazil 3224  
transmission of 2658
- Culicoides phlebotomus*  
feeding behaviour in 2387  
flight activity in 2387  
in Trinidad and Tobago 2386, 2387  
*Mansonella ozzardi* in, in Trinidad 2386  
on man, in Trinidad 2386, 2387  
traps for 2387
- Culicoides pulicaris*  
in USSR 1030  
seasonal abundance of 1030  
group of, taxonomy of, wing patterns as characters for 3305
- Culicoides pulicaris punctatus* (see *C. punctatus*)
- Culicoides pumilus*  
breeding places of 1574  
in France 1574
- Culicoides punctatus*  
breeding places of 2962  
in USSR 2647, 2962  
seasonal abundance of 2647, 2962
- Culicoides punctatus punctatus*  
in USSR 1024  
on birds, in Ukraine 1024
- Culicoides purus*  
descriptions of 863  
in Australia 863
- Culicoides pycnostictus*  
in South Africa 84  
on birds, in South Africa 84  
on sheep, in South Africa 84
- Culicoides reconditus*  
in USSR 1024  
on birds, in Ukraine 1024
- Culicoides riethi*  
in USSR 2647  
preyed on by, *Elaphrus cupreus* 3299  
seasonal abundance of 2647
- Culicoides saevus*, in China 2649
- Culicoides salinarius*  
in USSR 1024  
on birds, in Ukraine 1024
- Culicoides sanguisuga*  
host-seeking in 417  
in USA 417  
on livestock, in New York State 417
- Culicoides schultzei*, in South Africa 84
- Culicoides seifadineï*, in Yugoslavia 414
- Culicoides similis*, in South Africa 84
- Culicoides simulator*  
in USSR 2647  
seasonal abundance of 2647
- Culicoides sinanoensis*  
in USSR 2966  
life-cycle of 2966  
population age structure in 2966
- Culicoides spinosus*  
host-seeking in 417  
in USA 417  
on livestock, in New York State 417
- Culicoides stellifer*  
host-seeking in 417  
in USA 417  
on livestock, in New York State 417
- Culicoides stilobezzioides*  
*Chandlerella chitwoodae* in, infectivity of 2651  
in Canada 2651
- Culicoides subfasciipennis*  
breeding places of 1574  
in France 1574
- Culicoides subimmaculatus*  
in Australia 2143  
on man, in Queensland 2143  
seasonal abundance of 2143  
traps for 2143
- Culicoides travisi*  
*Chandlerella chitwoodae* in, infectivity of 2651  
in Canada 2651
- Culicoides variipennis*  
biology of 2388  
bluetongue virus in  
detecting of 627  
in Idaho 3282  
replication of 138  
emergence in 1575  
flight activity in 2384  
host-seeking in 417  
in USA 417, 1575, 2384, 2388, 3282  
on livestock, in New York State 417  
on sheep, in Idaho 3282  
rearing of, techniques for 628  
seasonal abundance of 2384  
traps for 1575
- Culicoides variipennis variipennis*  
in USA 3301  
rearing of, techniques for 3301
- Culicoides venustus*  
feeding behaviour in 2965  
host-seeking in 417  
in USA 417, 2965  
on cattle, in New York State 2965  
on livestock, in New York State 417
- Culicoides vidourlensis*, in Yugoslavia 414
- Culicoides williwilli*  
descriptions of 863  
in Australia 863
- Culicoidini, key 863
- Culiseta*  
control of 3265  
biological 2346  
in Canada 1533  
in Canary Islands 2071  
in Cuba 849  
in Finland 2957  
in France 3265  
in Hokkaido 603  
in Quebec 2881  
in Soviet Maritime Territory 3264  
in Spain 2941  
in USSR 1548  
larvae of, distinguishing instars of 2611  
on man, in Ukraine 1024  
seasonal abundance of 2957
- Culiseta alaskaensis*, taxonomy of, characters distinguishing *C. annulata* and 3248
- Culiseta annulata*  
descriptions of 2069  
in France 3199  
in USA 3248  
in USSR 3263  
in buildings, in District of Columbia 3248  
larval diet of 3263  
overwintering in 3248  
taxonomy of, characters distinguishing other *Culiseta* species and 3248
- Culiseta atlantica*  
descriptions of 2069  
in Azores 2069
- Culiseta incidens*  
control of  
biological 2916  
insecticides for 78  
descriptions of 2069  
in USA 2083, 2118, 2916  
in cemetery vases, in California 2916  
nutrition of 1238  
oviposition repellents for 1209
- Culiseta inornata*  
abdominal skeleton and muscles in 2615  
Cache Valley virus in  
replication of 104  
transovarial transmission of 104
- Culiseta inornata* *contd.*  
*Coelomomyces psorophorae* in, culturing of 1237  
control of  
biological 2084  
insecticides for 78, 2111  
*Dirofilaria immitis* in, in California 2083  
in Canada 1243, 1809  
in USA 1790, 2043, 2083, 2084, 2111, 2118, 3212  
in ponds, effects of aquatic plants on 1243  
insecticide resistance in, in Utah 3212  
nutrition of 1238  
predators of, effects of aquatic plants on 1243  
*Romanomeris nielsenii* in, development of 1817  
Trichomycetes in, in Nebraska 2043  
western equine encephalitis, virus in, in Manitoba 1809
- Culiseta longiareolata*  
autogeny in 1239, 1532  
biology of 2364  
chromosomes in 388  
staining of 1831  
in Azores 1239  
in Portugal 1532  
in South Africa 84, 2364  
stenogamy in 1239
- Culiseta melanura*  
eastern equine encephalitis, virus in, in New York State 3246  
in USA 1528, 1529, 3246  
on birds, in New York State 1529  
population dynamics of 1529  
western equine encephalitis, virus in, in New York State 3246
- Culiseta morsitans*  
control of, biological 1250  
*Entomophthora aquatica* in 1563  
in German Federal Republic 1250  
in USSR 1024  
on waterfowl, in Ukraine 1024
- Culiseta particeps*  
descriptions of 2069  
taxonomy of, characters distinguishing *C. annulata* and 3248
- Culiseta subochrea*  
descriptions of 2069  
taxonomy of, characters distinguishing *C. annulata* and 3248
- cultrata*, *Bakerdania*  
*cunicularia*, *Formica*  
*cunicularis*, *Xenopsylla*  
*cuniculi*, *Psoroptes*  
*cuniculi*, *Spilopsyllus*  
*cunninghamae*, *Chatia*  
*cupreus*, *Elaphrus*  
*cuprina*, *Lucilia* (*Phaenicia*)  
*cuprina*, *Phaenicia* (see *Lucilia cuprina*)  
*Cupronaphthe*, acaricidal activity of 955  
Curaçao (indexed under Netherlands Antilles)
- Curettage  
for removing eggs of *Tunga penetrans* from man 48  
for removing *Tunga penetrans* 52, 566
- Cuterebra fontinella*  
in Canada 155  
on man, in Ontario 155
- Cuterebra grisea*  
in Canada 1340  
on *Microtus townsendii*, effects of 1340
- Cuterebra lepvora*  
aggregation in 2165  
in USA 2165  
territoriality in 2165
- Cyanamide, against, *Musca domestica* 1372
- cyanaella*, *Dasyphora* (*Dasyphyrellia*)  
*cyanaella*, *Dasyphyrellia* (see *Dasyphora cyanaella*)
- cyanaescens*, *Psorophora*  
Cyanophyta, eaten by *Simulium* larvae 1037
- 1,6-Cyclodecadiene, 1-methyl-5-methylene-8-(1-methylethyl)-  
[S-(1E,6E)]-  
*Periplaneta americana*  
electroantennogram responses to 3152  
*P. americana* responses to 2540

- $\beta$ -Cyclodextrin**, pyrethroids formulated in 1437
- Cyclohexanamine**, *N*-dodecyl-*N*-methyl-, against, *Psoroptes* spp. 2488
- Cyclohexane**, 1,2,3,4,5,6-hexachloro- (see HCH)
- (1 $\alpha$ ,2 $\alpha$ ,3 $\beta$ ,4 $\alpha$ ,5 $\alpha$ ,6 $\beta$ )- (see Lindane)
- Cyclohexanecarboxamide**, *N,N*-dipropyl-, repellent for, *Panstrongylus megistus*, on rat 39
- Cyclohexanol**, 5-methyl-2-(1-methylethyl)-, *Periplaneta americana* olfactory responses to 797
- 3-Cyclohexene-1-methanol**,  $\alpha$ ,4-dimethyl- $\alpha$ -(4-methyl-3-pentenyl)-, repellent for, *Panstrongylus megistus*, on rat 39
- 2-Cyclohexen-1-one**, 2-methyl-5-(1-methylethyl)-, (5)-, in *Blumea* oil, probably not involved in insecticidal activity 2056
- Cycloheximide**, in *Periplaneta americana*, increasing susceptibility to carbaryl 2505
- Cyclopropanecarboxylic acid**, 3-(2-carboxy-1-propenyl)-2,2-dimethyl-, laboratory synthesis of 1434
- Cyclopropanecarboxylic acid**, 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-, cyano(3-phenoxyphenyl)methyl ester (see Cyhalothrin)
- Cyclopropanecarboxylic acid**, 3-(1,2-dibromo-2,2-dichloroethyl)-2,2-dimethyl-, cyano(3-phenoxyphenyl)methyl ester against
- Calliphora vicina* 1440
- Blattella germanica* 1440
- insecticidal activity of stereoisomers of 1440
- Cyclopropanecarboxylic acid**, 3-(2,2-dibromoethyl)-2,2-dimethyl-, cyano(3-phenoxyphenyl)methyl ester, (1*R*-*cis*)- against
- Psorophora columbiana* 1193
- Anopheles quadrimaculatus* 1193
- synergists for, piperonyl butoxide as 1193
- cyano(3-phenoxyphenyl)methyl ester, [1*R*-[1 $\alpha$ (*S*\*),3 $\alpha$ ]]- against
- Culex molestus* 75
- Anopheles atroparvus* 75
- Culicidae 78
- Aedes vexans* 387
- A. cantans* 387
- Culex molestus* 401
- Glossina palpalis* 435
- G. tachinoides* 435
- Rhipicephalus appendiculatus* 699
- Musca domestica* 1144
- Blattella germanica* 1144
- Psorophora columbiana* 1193
- Anopheles quadrimaculatus* 1193
- Glossina palpalis* 1326
- Musca domestica* 1378, 1439
- Calliphora vicina* 1440
- Blattella germanica* 1440
- Panstrongylus megistus* 1507
- Ixodes ricinus* 1639
- Glossina* spp. 1696, 1697
- Triatoma infestans* 1746
- Glossina palpalis* 1875
- G. tachinoides* 1875
- Culicidae 2111
- Glossina palpalis* 2157
- G. tachinoides* 2157, 2401, 2982
- G. palpalis* 2986
- G. tachinoides* 2986
- G. palpalis* 2987
- G. tachinoides* 2987
- G. spp.* 2989, 2990, 2991
- G. pallicera* 2992
- G. nigrofusca* 2992
- Amblyomma americanum* 3059
- Chironomidae 3346
- in aerial sprays, deposition of 2401
- in *Caridina africana*, toxicity of 2982
- in fish, toxicity of 2982
- in *Macrobrachium ravidens*, toxicity of 2982
- in *Periplaneta americana*, neurotoxicity of 3435
- Cyclopropanecarboxylic acid**, 3-(2,2-dibromoethyl)-2,2-dimethyl- *contd.*
- cyano(3-phenoxyphenyl)methyl ester, [1*R*-[1 $\alpha$ (*S*\*),3 $\alpha$ ]]- *contd.*
- in *Rhodnius prolixus*, effects on neurosecretory system of 1182
- in savanna, non-target effects of 2157
- non-target effects of 876
- on walls, persistence of 401
- persistence of 1326
- synergists for, piperonyl butoxide as 1193
- Cyclopropanecarboxylic acid**, 3-(2,2-dichloroethyl)-2,2-dimethyl-, cyano(3-phenoxyphenyl)methyl ester (see Cypermethrin)
- (3-phenoxyphenyl)methyl ester (see Permethrin)
- (3-phenoxyphenyl)methyl ester, (1*R*-*trans*)- (see Transpermethrin)
- (3-phenoxyphenyl)methyl ester, (1*R*-*trans*)- (see Biopermethrin)
- [3-(phenylmethyl)-1*H*-pyrrol-1-yl]methyl ester, against, *Musca domestica* 2502
- Cyclopropanecarboxylic acid**, 3-[(dihydro-2-oxo-3(2*H*)-thienylidene)methyl]-2,2-dimethyl-
- [5-(phenylmethyl)-3-furanyl]methyl ester, [1*R*-[1 $\alpha$ ,3 $\alpha$ (*E*)]]- against
- Musca domestica* 1144
- Blattella germanica* 1144
- Panstrongylus megistus* 1507
- in *Periplaneta americana*, neurotoxicity of 3435
- Cyclopropanecarboxylic acid**, 2,2-dimethyl-3-(2-methyl-1-propenyl)- (see Chrysanthemic acid)
- (6-chloro-1,3-benzodioxol-5-yl)methyl ester (see Barthrin)
- (1,3,4,5,6,7-hexahydro-1,3-dioxo-2*H*-isoindol-2-yl)methyl ester (see Tetramethrin)
- 2-methyl-4-oxo-3-(2-propenyl)-2-cyclopenten-1-yl ester (see Allethrin)
- (3-phenoxyphenyl)methyl ester (see Phenothrin)
- [5-(phenylmethyl)-3-furanyl]methyl ester (see Resmethrin)
- [5-(phenylmethyl)-3-furanyl]methyl ester, (1*R*-*cis*)- (see Cismethrin)
- [5-(phenylmethyl)-3-furanyl]methyl ester, (1*R*-*trans*)- (see Bioresmethrin)
- Cyclopropanecarboxylic acid**, 2,2,3,3-tetramethyl-, cyano(3-phenoxyphenyl)methyl ester (see Fenpropathrin)
- Cyclops**, in ponds, effects of insect growth regulators on 2412, 3024
- Cyclops aequatorialis** (see *Mesocyclops leuckarti aequatorialis*)
- Cyclops leuckarti** (see *Mesocyclops leuckarti*)
- Cyclops nigerianus** (see *Thermocyclops infrequens nigerianus*)
- Cyclops vernalis** (see *Acanthocyclops vernalis*)
- Cyclorrhapha**, in Finland 2344
- Cydistomyia emergens**
- feeding habits of 2716
- in South Africa 2716
- on man, in South Africa 2716
- Cyhalothrin** (cyano(3-phenoxyphenyl)methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate) against, *Musca domestica* 1439
- Cymbopogon citratus**, insecticidal activity of oil from 2879
- cynipsea**, *Sepsis*
- cynotis**, *Otodectes*
- Cypermethrin** (cyano(3-phenoxyphenyl)methyl 3-(2,2-dichloroethyl)-2,2-dimethylcyclopropanecarboxylate) against
- Anopheles quadrimaculatus* 1193
- Blattella germanica* 657, 1144, 1440
- Calliphora vicina* 1440
- Damalinea bovis*, on cattle 1742
- Glossina palpalis* 1326, 2157
- G. tachinoides* 2157
- Cypermethrin** *contd.*
- against *contd.*
- Musca domestica* 657, 1144, 1378
- Psorophora columbiana* 1193
- Sarcoptes scabiei*, on pig 1959
- in *Periplaneta americana*, neurotoxicity of 3435
- in savanna, non-target effects of 2157
- insecticidal activity of 1438
- insecticidal activity of stereoisomers of 1440
- non-target effects of 876
- persistence of 1326
- synergists for, piperonyl butoxide as 1193
- (1*R*-*cis*)-, against, Chironomidae 3346
- [1*R*S-[1 $\alpha$ (*S*\*),3 $\alpha$ ]]-, against, Culicidae 78
- Cyperus esculentus**, *Aedes vexans*
- oviposition sites associated with 2612
- Cypridopsis**, in ponds, effects of insect growth regulators on 3024
- Cyprinodon macularius**
- adaptability to salinity of 1543
- in ponds, effects on ecosystem of 1543
- in rice-fields, effects on ecosystem of 1543
- Cyprinodon variegatus**, preying on, Culicidae, in New Jersey 3207
- cyprum**, *Amblyomma*
- cyprus**, *Aedes*
- Cyprus**
- medical entomology in 3267
- mosquito control in 370
- Cystic fibrosis**, in man, not affecting feeding by *Aedes aegypti* 621
- cysticola**, *Laminosioptes*
- L-Cystine**
- in *Aedes togoi*, utilisation by *Brugia pateri* of 68
- in *Anopheles atroparvus*, utilisation by *Brugia pateri* of 68
- Cytochrome oxidase** (see Oxidase, cytochrome)
- Cytochrome c oxidase** (see Oxidase, cytochrome)
- Cytochrome P-450**
- in Calliphoridae, induction of 2712
- in *Musca domestica*
- not involved in insecticide resistance 1606
- variation in 2379
- Cytoecetes phagocytophila**, in, *Ixodes ricinus*, in ovaries 1396
- Czechoslovakia**
- Acari in, on small mammals 933
- Aedes* spp. in, on cattle 3230
- A. cantans* in 387, 2942
- A. caspius* in, viruses in 1560
- A. pulchritarsis* in 2065
- A. vexans* in 387, 2942
- viruses in 1560
- Chaetopsylla matina* in, on *Vulpes* 1752
- Dermacentor reticulatus* in 238
- Hippoboscidae in 190
- Hypoderma bovis* in, on cattle 2690
- Ixodes laguri* in, on *Citellus* 239
- I. ricinus* in 924, 1639
- viruses in 3069
- Meoneura* spp. in 3016
- Mesostigmata in, on small mammals 2232
- Phoridae in 204
- Ruttenia loxodontis* in, on zoo elephant 2451
- Sarcophaga incisilobata* in, on man 897
- Simulium erythrocephalum* in 1857
- Siphonaptera in, in suslik nests 362
- Tabanidae in 189
- Tabanus* spp. in, on cattle 3230
- dacenkoi**, *Catallagia*
- dacotensis**, *Cnephia*
- Dactinomycin**, in *Periplaneta americana*, increasing susceptibility to carbaryl 2505
- daghestanicus**, *Dermacentor*
- dahli**, *Latrodectus*
- Dahomey** (see Benin)
- Dairies**, *Stomoxys calcitrans* in, in USA 904
- Dairy-waste lagoons**
- Culicidae in, in California 2120
- mosquito control in 2120
- daitensis**, *Aedes*



**dali, *Muritrombicula******Damalania bovis***

- biology of 2291, 2853
- control of 2853
- insecticides for 1742
- in Canada 1742
- in New Zealand 2290, 2291
- in USA 2853
- on cattle
  - distribution pattern of 2291
  - in New Zealand 2290
  - in Ontario 1742
  - in USA 2853
- seasonal abundance of 2290

***Damalania longicornis* (see *Rhabdopedilon longicornis*)*****Damalania ovis***

- control of 2524
- descriptions of 2850
- in Spain 2850
- in USA 2524
- on sheep
  - in Spain 2850
  - in Wyoming 2524
- $\gamma$ -radiation as affecting 30

***Damaliscus dorcas***

- arthropod parasites of, in South Africa 1888
- pest control on 1888

**dammini, *Ixodes*****damnosum, *Simulium******Daphnia magna*, *Bacillus thuringiensis* in, not pathogenic 1797****darimonti, *Tabanus*****darlingi, *Anopheles*****dasychnema, *Doratomyia******Dasyhelea*, mouthparts in 3300*****Dasyhelea moutouri***

- in Spain 129
- in tree holes, in Spain 129

**dasyorrrhus, *Aedes******Dasyphora*, in Norway 881*****Dasyphora cyanella* (see also *Dasyphyrellia cyanella*)**

- in Norway 881
- Dasyphyrellia*, taxonomy of, synonym of *Eudasyphora* 683

***Dasyphyrellia cyanella* (see also *Dasyphora cyanella*)**

- in UK 220
- in dog dung, in England 220

**daubentoni, *Pteracarus minutus******Daucus carota* (see Carrot)****davisi, *Lutzomyia* (*Psychodopygus*)****davisi, *Psychodopygus* (see *Lutzomyia davisi*)****DDE (mixture of isomers in which *p,p'*-DDE predominates)**

- in man, DDT metabolite 292

***p,p'*-DDE (1,1'-(dichloroethenylidene)bis[4-chlorobenzene])**

- in *Aedes aegypti*, DDT metabolite 2960

**DDT (mixture of isomers in which *p,p'*-DDT predominates)**

- against
  - Aedes aegypti* 2640
  - Anopheles* spp. 86, 1075, 2039, 3267
  - A. atroparvus* 75
  - A. balabacensis* 624
  - A. cruzii* 1204
  - in dwellings 1203
  - A. culicifacies* 3218
  - A. fluviatilis* 3270
  - A. funestus* 1794
  - in buildings 409
  - A. gambiae* 1794
  - in buildings 409
  - A. labbranchiae* 2128
  - A. letifer*, in dwellings 598
  - A. messeae* 404
  - A. nigerrimus* 1775
  - A. nili* 1794
  - A. philippinensis* 2054
  - A. pulcherrimus* 1758, 1775
  - A. sacharovi* 76
  - A. stephensi* 2054, 2640
  - A. superpictus* 1758
  - Armigeres subalbatus* 2640
  - Culex molestus* 75
  - C. sitiens* 2640
  - C. tritaeniorhynchus* 2640
  - Glossina* spp. 2989, 2990
  - G. palpalis* 1326

**DDT contd.****against contd.*****Glossina palpalis* contd.**

- in riverine forests 1698
- Ixodes persulcatus* 716, 977, 1035, 1036

***Musca domestica* 528, 1430*****Neopsylla sondaica* 565, 1190****Phlebotominae 1261, 1265*****Phlebotomus argentipes* 1263*****Sarcoptes scabiei*, on camel 3093*****Sergentomyia baghdadis* 1260*****S. shortii* 1260****Siphonaptera 2868*****Stivalius cognatus* 565, 1190, 2819****on *Rattus* 3188*****Xenopsylla cheopis*, on *Rattus* 3188****in *Anopheles atroparvus*, flight activity****caused by 2878****in *Anopheles gambiae*, not affecting*****Plasmodium yoelii* 824****in *Anopheles maculipennis*, effects on****behaviour of 95****in *Anopheles stephensi*, not affecting*****Plasmodium yoelii* 824****in building materials, persistence of 2039****in *Buphagus erythrorhynchus*, toxicity of****1643****in fish, residues of 1274****in fowl, residues of 1430****in *Gambusia affinis*, toxicity of 2794****in *Lucilia cuprina*, effects of  $\gamma$ -irradiation****on susceptibility to 888****in man, uptake through skin of 292****in mouse, effects on natural immunity of****1013****in *Musca domestica*****enzyme inhibition by 879****inducing mixed function oxidase 909****poisoning by 207****resistance to, in*****Aedes aegypti*, mechanisms of 2960*****Anopheles annularis*, in Pakistan 1775*****A. atroparvus*, in Caucasus 2596*****A. culicifacies* 1541, 3218****in Andhra Pradesh 607****in India 2054****in Pakistan 1775*****A. darlingi*, in Brazil 1767*****A. fluviatilis*, relation of sulfur content****and 2926*****A. gambiae*, preventing development of****824*****A. hyrcanus*, in Tajikistan 1758*****A. maculipennis*****in Caucasus 2596****in Iran 2911*****A. messeae*, in Caucasus 2596*****A. pulcherrimus*****in Iraq 2917****in Tajikistan 1758*****A. sacharovi*****in Iraq 2917****in Turkey 76*****A. stephensi*****and cross-resistance 3238****in India 2054****in Iran 2912****in Pakistan 1775*****A. subpictus*****in Pakistan 1775****in Pondicherry 2640*****A. superpictus*, in Tajikistan 1758*****Blattella germanica*, associated with****insensitive ATPase 1736*****Boophilus microplus*, in South Africa****939*****Cimex lectularius*, loss of 2572*****Culex quinquefasciatus* 2353, 3269****in Pondicherry 2640*****C. whitmorei*, in Pondicherry 2640****Culicidae****not affecting susceptibility to *Bacillus******thuringiensis* 2924****overcoming of 2887*****Phlebotomus papatasi*, in Bihar 1263****Siphonaptera 2315****vectors 2286*****Xenopsylla cheopis*, in Java 565, 1190,****2819****synergists for****chlorfenethol as 2353, 3238****piperonyl butoxide as 2353, 3238****DDT contd.**

- with disulfiram, and phenylmethyl benzoate, against, *Sarcoptes scabiei*, on man 292, 1673

**with HCH****against*****Anopheles atroparvus* 75*****Culex molestus* 75****DDT analogues, in *Periplaneta americana*,****structure-activity relationships in 3123*****p,p'*-DDT (1,1'-(2,2,2-trichloroethylidene)bis[4-chlorobenzene])****in *Aedes aegypti*, uptake and metabolism****of 2960****in *Gambusia affinis*, inducing vitellogenin****synthesis 3129****in *Periplaneta americana*, effects of 552****DDVP (see Dichlorvos)****Death****in Asian buffalo, caused by *Haematopinus******tuberculatus* 2250****in cattle, caused by *Simulium nigrum*****2973****in dog, caused by *Simulium nigrum* 2973****in fowl****caused by arthropods 1493****caused by lice 2013****in goat, caused by *Simulium nigrum*****2973****in guineafowl, caused by arthropods****1493****in man, caused by scorpion sting 1007****in pig, caused by *Vespa* 914****in sheep, caused by *Simulium nigrum*****2973*****debilis*, *Xenopsylla*****Decafentin (see Phosphonium,****decyltriphenyl-, bromochlorotriphenylstannate(1-))****Decamethonium (*N,N,N,N',N',N'*-****hexamethyl-1,10-decanediaminium)****in *Musca domestica*, binding to head****extracts of 1347****Decamethrin (see Cyclopropanecarboxylic****acid, 3-(2,2-dibromoethenyl)-2,2-****dimethyl-, cyano(3-****phenoxyphenyl)methyl ester, [1R-****[1 $\alpha$ (S\*),3 $\alpha$ ]]-)****1,10-Decanediaminium, *N,N,N,N',N',N'*-****hexamethyl- (see Decamethonium)****Decarboxylase, aromatic amino acid****in *Aedes aegypti*, characterisation of****1761****in *Lucilia cuprina*, insecticidal activity of****inhibitors of 1382****Decarboxylase, DOPA (see Decarboxylase,****aromatic amino acid)****decemlineata, *Leptinotarsa*****decimatum, *Simulium* (*Gnus*)****decimatus, *Gnus* (see *Simulium decimatum*)****Decis (see Cyclopropanecarboxylic acid, 3-****(2,2-dibromoethenyl)-2,2-dimethyl-,****cyano(3-phenoxyphenyl)methyl ester,****[1R-[1 $\alpha$ (S\*),3 $\alpha$ ]]-)****declarator, *Culex*****decoloratus, *Boophilus*****decoratus, *Listrophoroides*****decorum, *Simulium*****decorus, *Chironomus*****Deer*****Anopheles franciscanus* on, in California****2083*****Haemaphysalis concinna* on, in Italy****3062*****Hypoderma diana* on, diagnosis of 652*****Tabanidae* on, in Connecticut 1921, 2443****Deer farming, Ixodidae as affected by 3411****Deer, red (see *Cervus elaphus*)****Deer, roe (see *Capreolus capreolus*)****Deer, sika (see *Cervus nippon*)****Deet (*N,N*-diethyl-3-methylbenzamide)****in clothing 1937****ineffective as flushing agent for*****Panstrongylus megistus* 1507****repellent for*****Aedes* spp., on cattle 3230*****A. aegypti* 2347, 2374*****Amblyomma americanum*, on man****1937*****Ixodes ricinus* 928*****Panstrongylus megistus*, on rat 39*****Simuliidae*, on cattle 1288*****Tabanus* spp., on cattle 3230**

- DEF** (see Phosphorothrithioic acid, *S,S,S*-tributyl ester)
- Defensive secretions**  
*Periplaneta fuliginosa* 2846  
*P. japonica* 2846  
*Vespa crabro* 1631
- Dehydrogenase, in *Anopheles***, polymorphism of 1768
- Dehydrogenase, glucose 6-phosphate** in *Musca domestica*  
 role in energy production of 157  
 role in insecticide resistance of 879  
 isoenzymes, in *Hyalomma*, use in taxonomy of 934
- Dehydrogenase, glyceraldehyde phosphate** isoenzymes  
 in *Culex ocoosa* 2923  
 in *Culex panocossa* 2923
- Dehydrogenase, glycerol phosphate** in Phlebotominae, use as taxonomic character of 2967  
 isoenzymes  
 in *Aedes aegypti*, activity pattern of 2034  
 in *Culex pipiens*, properties of 2940
- Dehydrogenase, isocitrate** in *Aedes aegypti*, genetics of 73  
 in *Musca domestica*, role in energy production of 157
- Dehydrogenase, lactate** in *Aedes aegypti*, activity pattern of 2034  
 in *Periplaneta americana* coxal muscles, heterogeneity of 794  
 isoenzymes, in *Hyalomma*, use in taxonomy of 934
- Dehydrogenase, malate** in *Lutzomyia umbratilis* 140  
 in Phlebotominae, use as taxonomic character of 2967  
 isoenzymes  
 in *Aedes aegypti*, activity pattern of 2034  
 in *Hyalomma*, use in taxonomy of 934  
 in *Triatoma infestans* 41
- Dehydrogenase, malate (oxalacetate-decarboxylating) (nicotinamide adenine dinucleotide phosphate)** in *Hyalomma impressum* eggs, not found 934  
 in *Hyalomma anatolicum* eggs, not found 934
- Dehydrogenase, phosphogluconate** in *Musca domestica*  
 properties of 2171  
 role in insecticide resistance of 879  
 isoenzymes, in *Culex pipiens* 369
- Dehydrogenase, succinate** in *Babesia ovis* sporozoites 3077  
 in *Periplaneta americana*, effects of *Heterometrus fulvipes* venom on 2784  
 in *Periplaneta americana* coxal muscles, heterogeneity of 794  
 in *Theileria annulata* sporozoites 3077
- Dehydrogenase, xanthine** isoenzymes  
 in *Culex ocoosa* 2923  
 in *Culex panocossa* 2923
- Delia antiqua**  
 marking of, radiophosphorus for 754  
 mating in, detecting of 754
- Delichon urbica**, Hippoboscidae in nests of, in Czechoslovakia 190
- deliense, Leptotrombidium**
- deliensis, Trombicula akamushi** (see *Leptotrombidium deliense*)
- Delostichus**, on Rodentia, in Argentina 357
- Deltamethrin** (see Cyclopropanecarboxylic acid, 3-(2,2-dibromoethenyl)-2,2-dimethyl-, cyano(3-phenoxypheyl)methyl ester, [1R-[1 $\alpha$ (S\*),3 $\alpha$ ]]-)
- Delusions**  
 concerning arthropod infestations 1420  
 concerning noxious arthropods 1136
- Demodex**  
*Dermatophilus congolensis* in, transmission of 777  
 on cat, in Western Australia 3104  
 on cattle  
 effects of 521  
 in Nigeria 245
- Demodex contd.**  
 on dog, effects of 2229  
 on domestic animals, in Zambia 1333  
 on man, role in blepharitis of 1666  
 on *Odocoileus virginianus*, effects of 2229  
 on zebu, in Malaysia 2538  
 taxonomy of 1001
- Demodex aurati**  
 control of, acaricides for 282  
 descriptions of 282  
 in Israel 282  
 on golden hamster, in Israel 282
- Demodex bovis**  
 in Nigeria 521  
 on cattle, in Nigeria 521
- Demodex brevis**  
 control of, acaricides for 726  
 on man, effects of 726
- Demodex cafferi**  
 in Botswana 2241  
 on African buffalo, in Botswana 2241
- Demodex canis**  
 control of, acaricides for 2766  
 fenclorophos resistance in, in Queensland 2766  
 in Australia 2766  
 in Indonesia 2806  
 in Sudan 3418  
 on dog  
 effects of 2228, 3418  
 in Indonesia 2806  
 in Queensland 2766  
 taxonomy of, characters distinguishing *D. cati* and 279
- Demodex caprae**  
 karyotype of, anomalous leg development and 927  
 on goat, distribution pattern of 988
- Demodex cati**  
 control of, acaricides for 2234  
 description of 279  
 in USA 279, 2234  
 on cat, in Massachusetts 279  
 on *Uncia uncia*, in San Antonio Zoo 2234  
 taxonomy of  
 characters distinguishing *D. canis* and 279  
 neotype for 279
- Demodex criceti**  
 control of, acaricides for 282  
 descriptions of 282  
 in Israel 282  
 on golden hamster, in Israel 282
- Demodex folliculorum**  
 control of, acaricides for 726, 1665  
 descriptions of 1415  
 in France 1665  
 on dog, in France 1665  
 on man  
 blepharitis caused by 1415  
 effects of 726
- Demodex ghanensis**  
 in Nigeria 521  
 on cattle, in Nigeria 521
- Demodex zalophi**  
 sp. nov., description of 2228  
 in Australia 2228  
 in USA 2228, 2229  
 on *Zalophus californianus*, effects of 2228, 2229
- Demodicidae**, speciation in, synhospitality and 921
- Dendroica coronata, Ceratophyllus gallinae** on, in Alaska 1187
- Dendrolaelaps**  
 in Transbaikalia 1032  
 in USSR 1006
- Dendrophonon querceti**, in China 1618
- dendrophilus, Culicoides**
- Dengue**  
 in French Guiana 1154  
 in Puerto Rico 3247
- Dengue hemorrhagic fever** (see Hemorrhagic fever, dengue)
- Dengue virus**  
 control of, vector control for 115  
 in  
*Aedes* spp., in Tonga 1236  
*A. aegypti*  
 replication of 85  
 transmission of 82, 390
- Dengue virus contd.**  
 in contd.  
*Aedes* contd.  
*A. albopictus*  
 in Seychelles 1825  
 infectivity of 1526, 2883  
 transmission of 82  
*A. luteocephalus*, in Senegal 1244  
 man  
 in Jamaica 845  
 in Senegal 1244  
 in Seychelles 1825  
*Toxorhynchites amboinensis*, infectivity of 2883  
 vectors of 2801
- Denmark**  
 applied entomology in 1479  
*Macrothylacia rubi* in, on man 690  
 mites in, in house dust 280  
*Rhipicephalus sanguineus* in, on dog 3400  
 Tarsonemina in, in house dust 287
- Densovirus**, in *Periplaneta fuliginosa*, characterisation of 547
- dentata, Sergentomyia**
- dentatum, Omophron**
- dentatus, Ixodes**
- Deoxyribonucleic acids**  
 in *Aedes aegypti* accessory glands, synthesis of 2602  
 in *Calliphora vicina*  
 effects of methoprene on synthesis of 3354  
 effects of moulting hormones on synthesis of 3354  
 in *Haematobia irritans* ovaries 898  
 in *Leucophaea maderae* ovarian follicles, JH stimulating synthesis of 24, 25  
 in *Leucophaea maderae* ovaries  
 role of JH in synthesis of 1732  
 synthesis of 2558  
 in *Musca domestica* eggs, effects of  $\gamma$ -irradiation on 478  
 in *Periplaneta americana*, effects of thermal acclimation on 1490  
 in *Sarcophaga bullata* mid-gut, effects of diet on 158  
 in *Stomoxys calcitrans*, diflubenzuron inhibiting synthesis of 3367
- Depressaria angustati**  
 in Canada 2617  
 on *Cicuta douglasii*, in British Columbia 2617  
 parasites of, in British Columbia 2617
- Dermacarus ochotonae**  
 sp. nov., description of 2772  
 in Pakistan 2772  
 on *Ochotona rufescens*, in Pakistan 2772
- Dermacenter**  
 Congo virus in, transmission of 1945  
 control of 1480  
 in Italy 3064  
 on livestock, in Mongolia 1480  
 on *Microtus arvalis*, in USSR 496  
*Pasteurella tularensis* in, transmission of 496  
 Powassan virus in, transmission of 3137  
 sex-pheromone glands in 2744  
 spotted-fever rickettsiae in, transmission of 3137  
 tick-borne encephalitis, virus in, transmission of 2733
- Dermacentor albipictus**  
 in Canada 556  
 in USA 1398  
 on domestic animals, in Connecticut 1398  
 on *Odocoileus*, in Alberta 556
- Dermacentor andersoni**  
*Anaplasma marginale* in, morphology of 2222  
 antigens of, inducing host resistance 3067  
*Babesia microti* in, not transmitted 242  
 Colorado tick fever  
 virus in  
 in Colorado 1403, 3406  
 transmission of 3137  
 control of 2524  
 immunization for 3390  
 in USA 1403, 2524, 3065, 3406  
 on *Eutamias minimus*, in Colorado 1403, 3406



***Dermacentor andersoni* contd.**

- on guinea-pig, immunization against 3067
- on *Spermophilus maniculatus*, in Colorado 1403
- on sheep, in Wyoming 2524
- on *Spermophilus lateralis*, in Colorado 1403, 3406
- phospholipids in, developmental changes in 2757
- Rickettsia rickettsi* in, transmission of 966
- salivary glands in 2477
- sex pheromone of, storage of 3404
- spotted-fever rickettsiae in, in Montana 3065
- sugars in, developmental changes in 1400
- tick-borne encephalitis, virus in, infectivity of, effects of immunization on 3390

***Dermacentor daghestanicus***

- in USSR 1636
- olfactory sensilla in 3409
- Salmonella typhimurium* in, trans-stadial transmission of 3084

***Dermacentor marginatus***

- Bhanja virus in, transmission of 2233
- Coxiella burnetii* in, in Kirgizia 1688
- habitats of 1072
- in Italy 3064
- in Spain 2233, 2869
- in USSR 1060, 1072, 1688, 3083
- in Yugoslavia 237, 701
- on mule, in Italy 3064
- on *Mus musculus*, in Crimea 1060
- on *Oryctolagus cuniculus*, in Spain 2869
- on Rodentia, in Siberia 3083
- Rickettsia slovaca* in, transmission of 1647
- ultrastructure of 271
- Salmonella typhimurium* in, trans-stadial transmission of 3084
- spotted-fever rickettsiae in, ultrastructure of 932
- tick-borne encephalitis, virus in, in Kirgizia 1688

***Dermacentor niveus***

- in Iran 2750
- on *Ovis orientalis*, in Iran 2750

***Dermacentor parumapertus*, cell cultures from 1469*****Dermacentor pictus***

- in USSR 3083
- in Yugoslavia 701
- on Rodentia, in Siberia 3083
- physiological age of, mid-gut epithelium as indicator of 706
- Salmonella typhimurium* in, trans-stadial transmission of 3084

***Dermacentor raskemensis***

- in Iran 2750
- on goat, in Iran 2750
- on *Ovis orientalis*, in Iran 2750

***Dermacentor reticulatus***

- Babesia canis* in, development of 272
- development in 238
- feeding behaviour in 1646
- in Czechoslovakia 238
- in France 2743
- in Poland 238
- in Spain 1117
- in USSR 3399
- in Yugoslavia 237
- mapping of, with vegetation maps 2743
- on *Cervus elaphus*, in Spain 1117
- Pasteurella tularensis* in, in Yugoslavia 237
- Rickettsia sibirica* in, in Lithuania 3399

***Dermacentor silvarum***

- embryonic development in, effects of humidity on 717
- human activity as affecting 3411
- in USSR 3411
- oviposition in, effects of humidity on 717

***Dermacentor variabilis***

- Anaplasma marginale* in, detecting of 2223
- morphology of 2222
- trans-stadial transmission of 2223
- Babesia microti* in, not transmitted 242
- carbon dioxide in, responses to 604
- engorgement in 273

***Dermacentor variabilis* contd.**

- gut in, passage of host macromolecules across 3402
- in USA 234, 248, 278, 967, 1398, 1408, 2465
- on dog
  - in Connecticut 1398
  - in New York 278
- on man, in Connecticut 1398
- on *Microtus pennsylvanicus*, in Connecticut 248
- on *Peromyscus leucopus*, in Connecticut 248
- on *Procyon lotor*, in Connecticut 248
- on rabbit
  - antibodies to 3402
  - feeding by 273
- on rat, resistance to 1407
- on wildlife, in Oklahoma 2465
- Rickettsia montana* in, in Massachusetts 967
- in Ohio 234
- R. prowazekii* in, not transmitted 3066
- R. rickettsi* in, in Massachusetts 967
- in Ohio 234
- transmission of 966
- salivary glands in 2477
- seasonal abundance of 248
- sex pheromone of, storage of 3404
- spotted-fever rickettsiae in, in New York 278

***Dermanyssidae***

- chaetotaxy of 921
- in Australasia 508

***Dermanyssus***

- control of, acaricides for 2687
- on rabbit, in Upper Volta 2687

***Dermanyssus americanus***

- control of, acaricides for 1670
- in USA 1670
- on man, dermatitis caused by 1670

***Dermanyssus gallinae***

- carotenoids in, and in fowl 800
- control of
  - acaricides for 2242, 2564
  - biological 1048
- in Argentina 984
- in Poland 2564
- in UK 2242
- in dwellings, in Argentina 984
- on fowl, in Poland 2564
- on man, rash caused by 2242

***Dermatitis***

- in cat, caused by flea collars 2026
- in man
  - caused by *Cheyletiella* 1965
  - caused by *Dermanyssus americanus* 1670
  - caused by ectoparasites from pet animals 1417
  - caused by fleas from pets 2872
  - caused by *Macrothylacia rubi* 690
  - caused by *Ornithonyssus sylviarum* 1672
  - caused by *Paederus sabaeus* 3049
  - caused by *Pediculus humanus* 769
  - caused by pesticides 1684
  - caused by *Pyemotes tritici* 769
  - caused by *Pyemotes ventricosus* 1657
  - caused by *Pyemotes zwoelferi* 1967
  - caused by Trombiculidae 2811
  - in pig, caused by *Sarcoptes scabiei* 985

***Dermatitis, atopic***

- in man
  - caused by Culicidae 1764
  - caused by *Dermatophagoides farinae* 1420
  - caused by *Sarcophaga carnaria* 769

***Dermatobia hominis***

- antigens of 1588
- control of 1589
- on rabbit
  - antibodies to 1588
  - immune responses to 3334
  - immunization against 1589

***Dermatophagoides***

- allergens of, in feces 2489
- in house dust 287

***Dermatophagoides farinae***

- aggregation in 3424
- alarm pheromone in 1652
- allergens of, standardisation of 3106

***Dermatophagoides farinae* contd.**

- antigens of 3097
  - biotopes of 517
  - control of, dust control for 1426
  - enzymes in, and in house dust 1964
  - in Canada 1671
  - in India 2773
  - in Japan 727
  - in South Korea 2763
  - in USA 1420
  - in dwellings, in Uttar Pradesh 2773
  - in hospitals, in Uttar Pradesh 2773
  - in house dust
    - in Japan 727
    - in Ohio 1420
  - in mattress dust, in British Columbia 1671
  - in schools, in Uttar Pradesh 2773
  - on man
    - hypersensitivity to 923, 991, 1420, 1958, 3108, 3110
    - diagnosis of 723, 989, 990
    - seasonal variation in 2227
    - treatment of 1426
  - on mouse, immunization against 1418
  - seasonal abundance of 1671
- Dermatophagoides microceras*, on man, hypersensitivity to 923**
- Dermatophagoides pteronyssinus***
- activity in
    - effects of humidity on 923
    - effects of temperature on 923
  - allergens of 2492, 3111
  - properties of 986, 987
  - standardisation of 3107
  - antigens of 3097
  - biotopes of 517
  - control of 1975
  - dust control for 1426
  - development in
    - effects of humidity on 1972
    - effects of temperature on 1972
  - enzymes in, and in house dust 1964
  - in Canada 1671
  - in India 2773
  - in Japan 727
  - in Mexico 1127
  - in South Korea 2763
  - in UK 1975
  - in bedding, in UK 1975
  - in dwellings, in Uttar Pradesh 2773
  - in hospitals, in Uttar Pradesh 2773
  - in house dust
    - estimating of 1956
    - in Japan 727
    - in Mexico 1127
  - in mattress dust, in British Columbia 1671
  - in schools, in Uttar Pradesh 2773
  - life-span in
    - effects of humidity on 1972
    - effects of temperature on 1972
  - on man
    - antibodies to 1955
    - hypersensitivity to 520, 724, 769, 923, 1654, 1958, 1975, 2492, 3109, 3110, 3111, 3112
    - diagnosis of 989, 990, 992, 1419
    - treatment of 739, 1426, 2763
  - on rabbit, antibodies to 1956
  - seasonal abundance of 1671
- Dermophilus congolensis***
- epizootiology of 777
  - vectors of 777
- Dermestes maculatus***
- control of
    - barriers for 3057
    - insecticides for 486, 3057
  - gut in, passage of proteins through 200
  - illustrations of 486
  - in UK 486, 3057
  - in dwellings, in England 486
  - in poultry dung, in England 486
  - in poultry housing, damage caused by 3057
  - Naja mossambica* venom in, toxicity of 200
- Dermestidae*, preyed on by, *Loxosceles reclusa*, in Iowa 3430**
- Dermoglyphidae*, on budgerigar, in Japan 288**
- Dermoglyphus*, on *Colinus virginianus*, in USA 2001**

- Desantisa**, parasitising, *Latrodectus mactans*, in Puerto Rico 3429
- Desensitization**, immunologic for treatment of hypersensitivity to *Apis mellifera* venom 2459
- for treatment of hypersensitivity to house-dust mites 724, 739
- designatus**, *Pygmephorus desmodus*, *Psorergatoides desmodus rotundus*, *Psorergatoides desmodus* on, in French Guiana 736
- desmotes**, *Aedes*
- destructor**, *Glycyphagus* (see *Lepidoglyphus destructor*)
- destructor**, *Lepidoglyphus* (*Glycyphagus*)
- Detox** (see DDT)
- detritum**, *Hyalomma detritus*, *Aedes*
- Developing countries**
- Ixodoidea in, on cattle 714
- mosquito control in, manual 3205
- devia**, *Brachycoma dewitti*, *Whartonia*
- Dewpoint**, blood-feeding insects as affected by 2283
- Dextran**, in *Musca domestica*, permeability of Malpighian tubules to 3029
- Diagnosis**
- of blister-beetle poisoning in livestock 230
- of Chagas' disease 351
- of chorioptic mange in cattle 2761
- of *Haematopinus suis* on pig 985
- of hypersensitivity to *Apis mellifera* venom 1933
- of hypersensitivity to *Cladotanytarsus lewisi* 1596
- of hypersensitivity to house-dust mites 723, 989, 990, 992, 1419, 1654, 3420
- of hypersensitivity to Hymenoptera stings 1389, 2455, 3383
- of *Hypoderma* infestation in man 652
- of myiasis 2453
- of respiratory acariasis in canary 1413
- of scabies 514
- of scabies in pig 985
- diana**, *Hypoderma diannae*, *Schoengastia diantaeus*, *Aedes diaperinus*, *Alphitobius diaphanosoma brachyurum*
- in USA 3024
- in ponds, effects of insect growth regulators on 3024
- Diaptomus**, in ponds, effects of insect growth regulators on 3024
- Diarrhea**, in man, caused by *Anastrepha* 1344
- Diatomite** (see Kieselguhr)
- Diazinon** (*O,O*-diethyl *O*-[6-methyl-2-(1-methylethyl)-4-pyrimidinyl] phosphorothioate)
- against
- Amblyomma* spp. 703
- A. americanum* 3059
- Argas persicus*, in fowl housing 1718
- Blattella germanica* 1733
- in dwellings 796
- Cimex lectularius*, in fowl housing 1718
- Culex molestus* 401
- Hippobosca* spp., on cattle 2820
- Ixodoidea, on cattle 2820
- Lucilia cuprina*, on sheep 169, 1924, 2174
- Ornithodoros lahorensis* 3410
- Phlebotominae 2536
- Psoroptes ovis*, on sheep 285, 3101
- Stomoxys* spp., on cattle 2820
- formulations of, microencapsulated 1733
- in guinea-pig, toxicity of 1718
- in poultry, toxicity of 1718
- in sheep, persistence of 2563
- in vole, toxicity of 1718
- on walls, persistence of 401
- resistance to, in
- Boophilus microplus*, in South Africa 939
- Culex pipiens* 2604
- Lucilia cuprina*, in Queensland 194
- Diceromyia**, in tree holes, in Kenya 2876
- Dichlofenthion** (*O*-(2,4-dichlorophenyl) *O,O*-diethyl phosphorothioate)
- Dichlofenthion contd.**
- against, *Boophilus microplus*, on cattle 2746
- resistance to, in, *Lucilia cuprina*, in Queensland 194
- Dichlorvos** (2,2-dichloroethenyl dimethyl phosphate)
- against
- Aedes sierrensis*, in tree holes 2108
- Anopheles culicifacies* 3218
- Blattaria 788
- Boophilus microplus*, on cattle 2746
- Ceratophyllus gallinae*, on fowl 2564
- Cochliomyia hominivorax* 1132, 2169
- Culex quinquefasciatus* 3269
- C. tarsalis* 2101
- Dermanyssus gallinae* 2242
- on fowl 2564
- Goniocotes gallinae*, on fowl 2564
- Hypoderma* spp., on cattle 2689
- H. lineatum*, on cattle 441
- Menacanthus stramineus*, on fowl 2564
- Menopon gallinae*, on fowl 2564
- Musca domestica* 1893
- Oestrus ovis*, on sheep 3331
- Ornithodoros lahorensis* 3410
- Phlebotominae 2536
- Rhipicephalus sanguineus*, in dwellings 965
- Sternostoma tracheacolum*, on canary 1413
- in foodstuffs, residues of 2267
- in fowl, toxicity of 2564
- resistance to, in, *Culex pipiens* 2604
- with crotoxyphos
- against
- Haematobia irritans*, on cattle 1915
- Musca autumnalis*, on cattle 1915
- dickermani**, *Geomydoecus*
- Dicrocoelium dendriticum** (see also *Dicrocoelium lanceolatum*)
- in
- Cataglyphis aenescens*, in Kirgizia 3053
- Clausilia* spp., in Yugoslavia 688
- Formica* spp., in North Ossetia 1068
- F. gagates*, in Yugoslavia 688
- F. mesasiatica*, in Kirgizia 3053
- sheep, in Yugoslavia 688
- vectors of 316
- Dicrocoelium lanceatum** (see *D. dendriticum*)
- Dicrocoelium lanceolatum** (see also *Dicrocoelium dendriticum*)
- control of 2727
- in
- Cionella lubrica*, in France 2727
- Formica cunicularia*, in France 2727
- F. nigricans*, in France 2727
- sheep, in France 2727
- life history of 2727
- Dicrostonyx groenlandicus**, *Megabothris calcarifer* on, in Alaska 2322
- Dicrotendipes californicus**
- control of, insecticides for 3346
- in USA 3346
- in flood-control channels, in California 3346
- Dicrotophos** ((*E*)-3-(dimethylamino)-1-methyl-3-oxo-1-propenyl dimethyl phosphate)
- resistance to, in, *Boophilus microplus*, in South Africa 939
- Didelphis marsupialis**, *Rhodnius pallescens* on, in Panama 2576
- Didelphis virginiana**, ectoparasites of, in Oregon 2302
- Dieldrin** ((1 $\alpha$ ,2 $\beta$ ,2 $\alpha$ ,3 $\beta$ ,6 $\beta$ ,6 $\alpha$ ,7 $\beta$ ,7 $\alpha$ )-3,4,5,6,9,9-hexachloro-1 $\alpha$ ,2,2 $\alpha$ ,3,6,6 $\alpha$ ,7,7 $\alpha$ -octahydro-2,7,3,6-dimethanonaphth[2,3-b]oxirene)
- against
- Aedes aegypti* 2640
- Anopheles culicifacies* 3218
- A. fluviatilis* 3270
- A. maculipennis* 2911
- A. stephensi* 2640
- Armigeres subalbatus* 2640
- Culex quinquefasciatus* 2353
- C. sitiens* 2640
- Glossina* spp. 1329
- G. morsitans* 1330
- Dieldrin contd.**
- against contd.
- Glossina* contd.
- G. tachinoides* 2982
- Phlebotomus argentipes* 1263
- P. papatasi* 1263
- Psoroptes cuniculi* 2487
- P. ovis* 2487
- Stivalius cognatus* 565, 1190, 2819
- Xenopsylla cheopis* 565, 1190, 2819
- in *Blaberus discoidalis*
- metabolism of 332, 2010
- uptake of 332
- in fish, residues of 1274
- in *Lucilia cuprina*
- effects of  $\gamma$ -irradiation on susceptibility to 888
- effects on field performance of 2435
- in *Musca domestica*, inducing mixed function oxidase 909
- in *Schistocerca gregaria*, metabolism of 2010
- non-target effects of 2404
- persistence of 1329, 1330
- resistance to, in
- Aedes aegypti*, genetics of 3291
- Anopheles annularis*, in Pakistan 1775
- A. culicifacies*
- in Andhra Pradesh 607
- in Pakistan 1775
- A. gambiae*, genetics of 824
- A. nigerrimus*, in Pakistan 1775
- A. pulcherrimus*, in Pakistan 1775
- A. stephensi*
- in Iran 2912
- in Pakistan 1775
- A. subpictus*
- in Pakistan 1775
- in Pondicherry 2640
- Boophilus microplus*, in South Africa 939
- Cimex lectularius*, persistence of 1184
- Culex quinquefasciatus*, in Pondicherry 2640
- C. tritaeniorhynchus*, in Pondicherry 2640
- C. whitmorei*, in Pondicherry 2640
- Culicidae, not affecting susceptibility to *Bacillus thuringiensis* 2924
- Lucilia cuprina*
- in Victoria 2199
- purposely linked to Y chromosome 2435
- vectors 2286
- Diethylcarbamazine** (*N,N*-diethyl-4-methyl-1-piperazinecarboxamide)
- against
- Brugia malayi*, in man 2140
- Wuchereria bancrofti*, in man 1794
- difficilis**, *Hybomitra difficilis*, *Xenopsylla*
- Diffingera spinosa**
- descriptions of 1890
- in, *Culex pipiens*, in USSR 1890
- taxonomy of, transferred from *Weiseria* 1890
- Diffingera turgenica**
- in, Simuliidae 1890
- taxonomy of, transferred from *Pleistophora* 1890
- diffinis**, *Ceratophyllus*
- Diflubenzuron** (*N*-[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide)
- against
- Aedes aegypti* 1453, 1710, 2829
- A. caspius* 1710
- Anopheles messeae*, in rice-fields 56
- A. sundaicus* 1554
- Chironomidae 1366, 2412
- Cricotopus sylvestris*, in rice-fields 56
- Culex pipiens* 1710, 1754
- C. quinquefasciatus*, in pig waste 374
- Manduca sexta* 1453
- Musca autumnalis* 2829
- M. domestica* 1368, 1453
- Plodia interpunctella* 1453
- Psoroptes cuniculi* 2767
- Tribolium confusum* 1453
- formulations of, controlled release 2829
- in *Anopheles gambiae*, not affecting *Plasmodium yoelii* 824



- Diflubenzuron** *contd.*  
 in *Anopheles stephensi*, not affecting *Plasmodium yoelii* 824  
 in *Carcinus mediterraneus*, effects of 69  
 in *Culex pipiens*, effects of 1754  
 in *Lepomis macrochirus*, residues of 2109  
 in *Leucophaea maderae*, inhibition of chitin synthesis by 1453  
 in *Lucilia cuprina*, effects on chitin deposition of 911  
 in *Musca domestica*  
   delaying toxic effects of fluorine compounds 1892  
   transfer to eggs of 1368  
 in natural waters, residues of 2109  
 in ponds, non-target effects of 2412, 3024  
 in *Stomoxys calcitrans*  
   effects on cuticle formation of 656  
   inhibition of chitin synthesis by 452  
   inhibition of DNA synthesis by 3367  
   not inhibiting chitin synthase 1901, 3032  
   persistence of 2438  
   resistance to, in, *Musca domestica*, development of 466
- digitatum, Trichoprosopon**  
**Diglochis hybomitri**  
 sp. nov., description of 156  
 in USSR 156  
 parasitising, *Hybomitra* spp., in USSR 156
- Diglochis sylvicola**, descriptions of 156  
**Diglochis terteriani**  
 sp. nov., description of 156  
 in USSR 156  
 parasitising, *Tabanus bromius*, in Armenia 156
- Dimecron** (see Phosphamidon)  
**1,4,5,8-Dimethanonaphthalene-2,3-diol, 5,6,7,8,9-hexachloro-1,2,3,4,4a,5,8a-octahydro-**, in *Blaberus discoidalis*, dieltrin metabolite 332  
**1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-** (1a,4a,4a $\beta$ ,5a,8a,8a $\beta$ )- (see Aldrin) (1a,4a,4a $\beta$ ,5 $\beta$ ,8 $\beta$ ,8a $\beta$ )- (see Isodrin)  
**2,7,3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-** (1a $\alpha$ ,2 $\beta$ ,2a $\alpha$ ,3 $\beta$ ,6 $\beta$ ,6a $\alpha$ ,7 $\beta$ ,7a $\alpha$ )- (see Dieltrin)  
 (1a $\alpha$ ,2 $\beta$ ,2a $\beta$ ,3a $\alpha$ ,6a $\alpha$ ,6a $\beta$ ,7 $\beta$ ,7a $\alpha$ )- (see Endrin)
- Dimethoate** (*O,O*-dimethyl *S*-[2-(methylamino)-2-oxoethyl] phosphorodithioate)  
 against  
   *Amblyomma* spp. 703  
   *Musca domestica* 1893  
   Trombiculidae, on *Rattus* 1412  
 in *Bacillus thuringiensis*, not toxic 312  
 in rodent baits 1412  
 on building materials, persistence of 203  
 resistance to, in  
   *Culex pipiens* 2604  
   *Musca domestica*, in German Democratic Republic 3350  
   WHO data sheet on 3119
- Dimethoxon** (see Omethoate)  
**Dimethyl sulfoxide** (sulfinylbis[methane])  
 in *Rhipicephalus appendiculatus*, toxicity of 2225
- dimidiatus, Chrysops**  
**Dimilin** (see Diflubenzuron)  
**Diminazene aceturate**, in cattle, effects on infectivity of *Babesia* to ticks of 1069
- diminuata, Orthohalarachne**  
**diniana, Zeiraphera**  
**Dioflagellata**, in ponds, effects of insect growth regulators on 3013  
**Dinopsyllus apistus**, in Burundi 49  
**Dinopsyllus longifrons**, in Burundi 49  
**Dinopsyllus lypus**  
 in Tanzania 2030  
 on rodents, in Tanzania 2030
- Dinoseb** (2-(1-methylpropyl)-4,6-dinitrophenol)  
 in *Culex molestus*, toxicity of 3289
- 3,5-Dioxa-6-aza-4-phosphaoct-6-ene-8-nitrile, 7-(2-chlorophenyl)-4-ethoxy-, 4-sulfide** (see Chlorphoxim)
- 3,5-Dioxa-6-aza-4-phosphaoct-6-ene-8-nitrile, 4-ethoxy-7-phenyl-, 4-sulfide** (see Phoxim)
- Dioxacarb** (2-(1,3-dioxolan-2-yl)phenyl methylcarbamate)  
 against  
   *Blattella germanica* 771  
   *Culex molestus* 401  
   *C. pipiens* 761  
   *Ixodes ricinus* 1639  
   *Musca domestica* 761, 773, 1893  
 anticholinesterase activity of 761  
 in building materials, persistence of 771, 773  
 in mouse, toxicity of 761  
 on walls, persistence of 401  
 selective toxicity of 761
- Dioxaphos**, against, *Hypoderma* spp., on cattle 2689
- Dioxathion** (*S,S'*-1,4-dioxane-2,3-diyl bis(*O,O*-diethyl phosphorodithioate))  
 against, *Amblyomma* spp. 703  
 in dips, determination of 1010  
 resistance to, in, *Boophilus microplus*, in South Africa 939  
 with chlorfenvinphos, in *Buphagus erythrorhynchus*, toxicity of 1643
- Dipetalogaster maxima, Trypanosoma cruzi**  
 in, isolating of 36
- Dipetalonema dessetae**  
 in  
   *Aedes aegypti*, effects on adipose tissue of 59  
   *A. togoi*, effects on adipose tissue of 59
- Dipetalonema perstans**, in, man, in Gabon 861
- Dipetalonema viteae**  
 in  
   golden hamster, effects of host gender on 697  
   *Ornithodoros tartakovskyi*, transmission of 697
- Diphtheroid**, in, *Blatta orientalis*, in UK 3157
- Diplocentridae**  
 biology of 745  
 in Cuba 745
- Diplogasteridae**, in, insects, book 1134
- Diploptera punctata**, abdominal exocrine glands in 337
- Dipodillus simoni, Leptotrombidium spatzi**  
 on, in Tunisia 2490
- Dipodomys ordii**, mites on, in Oregon 2249
- Dipophene** (see Chloromethiuron)
- Dips**  
 dioxathion in, determination of 1010  
 quinfiofos in, determination of 1010
- Diptera**  
 bacteria in, in Kirghizia 1033  
 blood-feeding in, evolution of 1170  
 blood-sucking, in Ukraine 1062  
 chromosomes in 1995  
 control of, water management for 532  
 diapause in, review 1191  
 helminths in, in Uzbekistan 316  
 host skin penetration by 2327  
 in Finland 2344  
 in Nearctic region, book 2587  
 in West Malaysia 2803  
 in *Agelaius phoeniceus* nests, in Manitoba 864  
 in carrion, breeding seasons of 3364  
 in cattle-dung fertilizer, in Irish Republic 324  
 in cattle farms, in Yugoslavia 901  
 in livestock farms, movement to towns of 900  
 in pheasant carcasses, in UK 2183  
 in poultry housing, in England 1717  
 in rice-fields, in California 2093  
 in zoological gardens  
   in India 3189  
   in Java 3189  
   in Tanzania 3189  
 olfactory system in, evolution of 3132  
 on birds, in Kirghizia 1033  
 on cattle, in German Federal Republic 465  
 on man, hypersensitivity to 319  
 overwintering of, in birds' nests 2005  
 parasitised by, *Dirhinus* spp., in Indian subregion 3056
- Diptera** *contd.*  
 pathogens in, modes of transmission of 1091  
 physiological age of, determining of 2874  
 preyed on by  
   *Crabro advena* 1923  
   *Gambusia affinis*, in California 2093  
 pyrethroids in, toxicity of 876  
 synanthropic  
   in cattle farms, in USSR 1040  
   in pig farms, in USSR 1040  
 taxonomy of 1719
- Dirhinini**  
 in Indian subregion 3056  
 taxonomy of 3056
- Dirhinus**  
 in Indian subregion 3056  
 taxonomy of 3056
- Dirhinus luzonensis**  
 parasitising  
   *Lucilia cuprina* 480  
   *Musca domestica* 480
- Dirofilaria immitis**  
 in  
   *Aedes aegypti*, infectivity of, genetics of 1786  
   *A. vexans*  
     in Michigan 378  
     transmission of 600  
   *Anopheles freeborni*, in California 2083  
   *A. quadrimaculatus*, in Michigan 378  
   *Culex pipiens*, development of 378  
   *Culiseta inornata*, in California 2083  
   dog, in California 2083
- Dirofilaria repens**, in, *Aedes aegypti*, utilisation of host constituents by 101
- Dirofilaria ursi**  
 in  
   *Simulium venustum*, development of 1296  
   *Ursus americanus* 1296
- dirus, Anopheles**  
**discoidalis, Blaberus**  
**discolor, Stomoxys**  
**discum, Leptotrombidium**  
**dispar, Lymantria**  
**dissidens, Apallates (Hippelates)**  
**dissidens, Hippelates** (see *Apallates dissidens*)  
**dissimilis, Amalaraeus penicilliger**  
**dissimilis, Malaraeus penicilliger** (see *Amalaraeus penicilliger dissimilis*)  
**distinguenda, Hybomitra**  
 District of Columbia, *Culiseta annulata* in 3248
- Disulfide, dimethyl, Cochliomyia**  
 hominivorax responses to 1896
- Disulfiram** (tetraethylthioperoxydicarbonic diamide (( $\text{Et}_2\text{N}$ ) $\text{C}(\text{S})_2\text{S}_2$ ))  
 against, *Sarcoptes scabiei*, on man 1673  
 with DDT, and phenylmethyl benzoate, against, *Sarcoptes scabiei*, on man 292, 1673  
 with phenylmethyl benzoate, against, *Sarcoptes scabiei*, on man 1673
- Ditches**  
 mosquito control in  
   *Bacillus thuringiensis* for 1798  
   insecticide drips for 1709
- 1,2,4-Dithiazol-1-ium, 3,5-bis(dimethylamino)-, chloride**, in *Periplaneta americana*, effects on ovaries of 1165
- dives, Mansonia**  
**Dixella**, in aquatic habitats, effects of pirimiphos-methyl on 2942
- Dixidae**  
*Bacillus thuringiensis* in, pathogenicity of 2086  
 parasitised by, *Arrenurus* spp., in West Germany 468
- Diximermis peterseni**  
 in  
   *Anopheles earlei*, in Quebec 1197  
   *A. punctipennis*, in Quebec 1197  
   *A. walkeri*, in Quebec 1197
- Dixol** (see Trichlorphon)  
**Djbouti, Ixodoidea** in 951
- DMSO** (see Dimethyl sulfoxide)  
**DNAase** (see Nuclease, deoxyribo-)

- DNOC** (2-methyl-4,6-dinitrophenol)  
for bush clearance in *Glossina* control 1331  
in vertebrates, residues of 1331
- Dobsonia moluccensis**, *Whartonia kulumadouensis* on, in Irian Jaya 2235
- Dobsonia pannietensis**, *Whartonia kulumadouensis* on, in Papua New Guinea 2235
- dobyi**, *Culicoides*  
4,7,10,13,16,19-Docosahexaenoic acid, in *Culex pipiens* diet, permitting flight 3214
- 2,4-Dodecadienethioic acid, 11-methoxy-3,7,11-trimethyl-, S-ethyl ester, (2E,4E)-** (see Triprene)
- 2,4-Dodecadienoic acid, 11-methoxy-3,7,11-trimethyl-, 1-methylethyl ester, (2E,4E)-** (see Methoprene)
- 2,4-Dodecadienoic acid, 3,7,11-trimethyl-ethyl ester, (2E,4E)-** (see Hydroprene)
- 2-propynyl ester, (2E,4E)-** (see Kinoprene)
- 1-Dodecanesulfonic acid**  
sodium salt  
against  
*Anopheles atroparvus* 75  
*Culex modestus* 75
- Dog** (*Canis familiaris*)  
*Anopheles freeborni* on, in California 2083  
*Centruroides sculpturatus* venom in, platelet aggregation caused by 3114  
*Cheyletiella* spp. on, in Connecticut 1965  
*C. yasguri* on  
in Italy 12  
transfer to man of 1414  
*Cochliomyia hominivorax* on, in Netherlands Antilles 457  
*Ctenocephalides canis* on, in England 2872  
*C. felis* on  
hypersensitivity to 363  
in England 2872  
*Culex pipiens* on, in Honshu 2908  
*Demodex* spp. on, effects of 2229  
*D. canis* on  
effects of 2228, 3418  
in Indonesia 2806  
in Queensland 2766  
*D. folliculorum* on, in France 1665  
*Dermacentor variabilis* on, in New York 278  
*Dirofilaria immitis* in  
in California 2083  
mosquito transmission of 600  
ectoparasites of, transfer to man of 1417  
*Haemaphysalis punctata* on, in Wales 3086  
human hypersensitivity to 1654  
Ixodidae on, in Connecticut 1398  
*Leishmania* spp. in, in Italy 764  
*L. donovani* in  
in France 132, 134  
phlebotomine transmission of 133  
*Orchopeas howardii* on, in England 2872  
pest control on, flea collars for 2028  
Phthiraptera on, in Afrotropical region, book 1177  
*Rhipicephalus sanguineus* on  
imported into New Zealand 1409  
in Denmark 3400  
in French Polynesia 1943  
in German Federal Republic 965  
in Italy 3063  
in Jamaica 2463  
in Karnataka 2470  
in Tasmania 533  
*Rickettsia montana* in, in Massachusetts 967  
*Sarcoptes scabiei* on, in Indonesia 2806  
*Simulium nigrum* on, in USSR 2973  
Siphonaptera on, in Alaska 2584  
spotted-fever rickettsiae in, in New York 278  
Tabanidae on, in Connecticut 1921, 2443  
tick control on, acaricides for 1459  
*Trypanosoma cruzi* in, in Chile 3176  
*T. evansi* in 184
- Dog biscuits**  
diet component for  
*Aedes detritus* 368  
*Anopheles annularis* 2059
- Dog dung**  
Diptera in, in England 220  
*Sarcocystis* spp. in, fly transmission of 220
- dohanyi**, *Blankaartia*
- Dolichopodidae**, pupae of 1348
- Dolichovespula**  
check-list of 484  
common names of 2457
- Dolichovespula arenaria**  
on man  
hypersensitivity to 1930  
diagnosis of 1389, 2455  
venom of 1930, 2455, 3381
- Dolichovespula maculata**  
on man  
hypersensitivity to 1930  
diagnosis of 1389, 2455  
venom of 1930, 2455, 3381
- Domestic animals**  
Acari on, in Afghanistan 695  
arthropod pests of, in Tasmania 533  
*Demodex* spp. on, in Zambia 1333  
ectoparasites of  
in Indonesia 2802  
in Philippines 2813  
in West Malaysia 2803  
Ixodidae on  
in Connecticut 1398  
in Turkmenia 1636  
*Lutzomyia trinidadensis* on, in Venezuela 632  
pesticides in, non-target effects of 1987  
*Sarcoptes* spp. on, in Zambia 1333
- domestica**, *Musca*
- domesticus**, *Acheta* (*Gryllus*)
- domesticus**, *Glycyphagus*
- domesticus**, *Gryllus* (see *Acheta domesticus*)
- domesticus**, *Rhodnius*
- dominica**, *Rhyzopertha*
- Dominican Republic**  
*Cubanochirus* spp. in, on *Solenodon* 1952  
eastern equine encephalitis in 3149
- donaldi**, *Anopheles*
- donarthuri**, *Ixodes*
- dongluensis**, *Leptotrombidium*
- Donkey** (*Equus asinus*)  
*Amblyomma cajennense* on, in Jamaica 2463  
*Anocentor nitens* on, in Jamaica 2463  
*Hyalomma anatolicum* on, in Egypt 3394  
*Oestroidea* on, book 2691  
*Phlebotomus chinensis* on, in China 868  
Phthiraptera on, in Afrotropical region, book 1177  
*Rhipicephalus sanguineus* on, in Egypt 3394
- DOPA decarboxylase** (see Decarboxylase, aromatic amino acid)
- Dopamine** (4-(2-aminoethyl)-1,2-benzenediol)  
in *Amblyomma hebraeum*, not inhibiting ATPase 2740  
in *Nauphoeta cinerea*, effects on salivary glands of 333
- Dopamine, N-acetyl-** (see Acetamide, N-[2-(3,4-dihydroxyphenyl)ethyl]-)
- Dopamine, 6-hydroxy-** (see 1,2,4-Benzenetriol, 5-(2-aminoethyl)-)
- Doratomyces**, in, *Culicidae*, in Ukraine 1757
- Doratopsylla birulai** (see *Corrodopsylla birulai*)
- Doratopsylla dasycnema**, in Hungary 2334
- dorsalis**, *Aedes*
- dorsalis**, *Lucilia cuprina*
- dorsomaculatus**, *Tityus trivittatus*
- Douglas virus**, in, cattle, in Queensland 862
- Dracaena**, *Aedes simpsoni* in axils of, in Nigeria 591
- Dracunculus medinensis**  
in, man, in Nigeria 637  
vectors of 637
- Drainage**  
mosquito breeding sites destroyed by 2128  
of salt marshes, for mosquito control 2381, 3279  
role in fly control of 532  
role in malaria control of 2372, 2380
- Drainage ditches**  
*Culicidae* in, in Missouri 3211  
*Simuliidae* in, in Poland 2391
- Drains**  
*Culex pipiens* in, in France 3297  
*C. quinquefasciatus* in, in Tamil Nadu 2600
- Dredgings**, *Culicidae* in, in South Carolina 2910
- dremomydis**, *Enderleinellus*
- Dremomys pernyi**, *Enderleinellus dremomydis* on, in China 558
- Drepanocerus kazirangensis**  
sp. nov., description of 2724  
in India 2724  
in Asian buffalo dung, in Assam 2724
- Drepanocerus runicus**  
in India 2724  
in dung, in India 2724
- Drepanocerus striatulus**  
in India 2724  
in dung, in India 2724
- dromedarii**, *Hyalomma*
- Dromedary** (see Camel)
- Drosophila**  
chromosomes in 1995  
mating success in, geographic variation in components of 3019  
sampling of 531  
sigma virus in 525
- Drosophila funebris**, control of 199
- Drosophila melanogaster**  
chromosomes in, maps of 2202  
control of, insecticides for 2506  
enzymes in 1761  
eyes in 2714  
retinal pigments in 2195  
sigma virus in, behaviour of 2134
- Drosophila pseudoobscura**, flight activity in, rhythm of 406
- drosophilae**, *Spalangia*
- Drought**, *Glossina* as affected by 1300, 1301
- Drying agents**, against, *Lucilia cuprina*, on sheep 2174
- Dryomyza anilis**  
descriptions of 2183  
in UK 2183  
in pheasant carcasses, in UK 2183
- dubia**, *Sergentomyia*
- Dubininetta**, taxonomy of, raised to generic rank 2770
- Dubininetta talpae**, taxonomy of, transferred from *Lynxacarus* 2770
- dubios**, *Culicoides*
- duboscqi**, *Phlebotomus*
- Duck** (see also named species)  
Japanese encephalitis, virus in, in India 573
- dufouri**, *Dasyhelea*
- Dugbe virus**  
in  
*Amblyomma variegatum*, in Kenya 1641  
*Rhipicephalus* spp., in Kenya 1641  
vectors of 1826
- Dugesia dorotocephala**, WHO data sheet on 1830
- Duiker, grey** (see *Sylvicapra grimmia*)
- Dung**  
*Aphodius* spp. in, seasonal abundance of 228  
biological control of 2831  
Coleoptera in, traps for 3380  
control of, biological 18, 19  
Hydrophilidae in, seasonal abundance of 228  
phoretic mites in, traps for 3380  
Scarabaeidae in 3054  
exploitation of 1392  
in France 919  
in German Federal Republic 3055  
*Scathophaga* spp. in, in Hokkaido 3023  
*Sphaeridium* spp. in 1928  
*Sphaeroceridae* in, in USSR 675  
utilisation by Scarabaeidae of 2208
- Dung beetle** (see Scarabaeidae)
- Dunnart, white-footed** (see *Sminthopsis leucopus*)
- Dunnock** (see *Prunella modularis*)
- duplex**, *Simulium johannseni*
- Duplicidentata**, Siphonaptera on, in Mongolia 2870



- dureni, *Sergentomyia***  
**durhami, *Armigeres***  
**Dursban** (see Chlorpyrifos)  
**Dwellings**  
*Aedes aegypti* in, in West Malaysia 1800  
*Alphitobius diaperinus* in, in England 486  
*Anopheles arabiensis* in, in Nigeria 766, 829  
*A. balabacensis* in  
in Arunachal Pradesh 624  
in Sabah 2055  
*A. cruzii* in, in Brazil 1203  
*A. culicifacies* in  
in Andhra Pradesh 607  
in Rajasthan 609  
*A. donaldi* in, in West Malaysia 1799  
*A. gambiae* in, in Nigeria 766, 829  
*A. letifer* in, in Sarawak 598  
*A. sacharovi* in, in Azerbaijan 850  
*A. stephensi* in, in Iran 2912  
arthropod pests in  
book 322  
in Tasmania 533, 1720  
in UK 331  
*Blattia orientalis* in, in UK 3157  
*Blattaria* in, in UK 1141  
*Blattella germanica* in, in California 796  
*Carcinops pumilio* in, in England 486  
*Centruroides sculpturatus* in, in California 2495  
cockroach control in  
evaluating of 2841  
insecticide formulations for 1733  
insecticides for 796  
*Crataerina pallida* in, in Scotland 2696  
*Culex* spp. in, in Bangladesh 1562  
*C. quinquefasciatus* in, in Brazil 2383  
*Dermatophagoides* spp. in, in Uttar Pradesh 2773  
*Dermestes maculatus* in, in England 486  
*Haemagogus* spp. in, in Brazil 2627  
house-dust mites in  
biotopes of 517  
effects of humidity on 280  
Hystriochopsyllidae in, in Morocco 3183  
insect pests in, in Canada 782  
*Lutzomyia trinidadensis* in, in Venezuela 632  
*Mansonia annulifera* in, in Kerala 2057  
*M. uniformis* in, in Kerala 2057  
mites in, in Argentina 984  
mosquito control in, insecticides for 1245  
*Musca* spp. in, in Assam 1595  
*M. domestica* in, in Orissa 2452  
*Oeciacus vicarius* in, in USA 44  
*Ornithonyssus sylvium* in, in Netherlands 1135  
*Panstrongylus megistus* in, in Brazil 812  
*Parcoblatta* spp. in, in Netherlands 1135  
*Periplaneta americana* in, in Philippines 1727  
pest control in 331, 1145  
book 7  
equipment for 561  
Phlebotominae in, in Bihar 1262  
*Phlebotomus argentipes* in, in Bihar 1260  
*P. major* in, in Sinkiang-Uighur 421  
*P. papatasi* in, in Gujarat 2662  
*Pulex irritans* in, in Burundi 49  
*Rhipicephalus sanguineus* in, in German Federal Republic 965  
*Rhodnius pallescens* in, in Panama 2576  
*R. prolixus* in, in Venezuela 561  
*Triatoma barberi* in, in Mexico 352  
*T. infestans* in, in Brazil 812, 2293, 2294  
*T. melanocephala* in, in Brazil 2296  
*T. sordida* in, in Brazil 812  
Triatominae in  
control of 3173  
in Brazil 807, 1137, 1744, 2299  
in Chile 3176  
in Paraguay 3174  
*Vespa crabro* in, in Maryland 1631  
**dycei, *Myianoetus***  
**Dyes**, in *Musca domestica*, toxicity of 3355  
**Dynamopidae**, in Saudi Arabia 2529  
**Dysdercus koenigii**, sterilisation of, chemosterilants for 1755  
**Dyspnea**, in canary, caused by *Sternostoma tracheacolum* 2759  
**Dytiscidae**, in ponds, effects of aquatic plants on 1243  
**dzhafarovi, *Culicoides***  
**Eadiea**, key 2236  
**Eadiea brevivhamata**  
on *Talpa europaea* 2236  
taxonomy of, characters distinguishing *E. neurotrichus* and 2236  
**Eadiea neurotrichus**  
sp. nov., description of 2236  
in Canada 2236  
in USA 2236  
on *Neurotrichus gibbsii*  
in British Columbia 2236  
in Washington State 2236  
**Eagle's minimum essential medium**, culture-medium component for, *Trypanosoma congolense* 2162  
**earlei, *Anopheles***  
**Earthworm**, for converting animal wastes into feedstuffs 2710  
**East Coast fever** (see also *Theileria parva*)  
laboratory model of 698  
**Eastern equine encephalitis** (see Encephalitis, eastern equine)  
**E.C. 1.1.1.49** (see Dehydrogenase, glucose 6-phosphate)  
**E.C. 1.2.1.37** (see Dehydrogenase, xanthine)  
**E.C. 1.3.99.1** (see Dehydrogenase, succinate)  
**E.C. 1.4.3.3** (see Oxidase, D-amino acid)  
**E.C. 1.5.1.2** (see Reductase, pyrroline-5-carboxylate)  
**E.C. 1.6.6.8** (see Reductase, guanylate)  
**E.C. 1.7.3.3** (see Oxidase, urate)  
**E.C. 1.9.3.1** (see Oxidase, cytochrome)  
**E.C. 1.10.3.1** (see Oxygenase, monophenol mono-)  
**E.C. 1.10.3.2** (see Oxygenase, monophenol mono-)  
**E.C. 1.11.1.6** (see Catalase)  
**E.C. 1.14.18.1** (see Oxygenase, monophenol mono-)  
**E.C. 2.4.1.16** (see Acetylglucosaminyltransferase, chitin-uridine diphosphate)  
**E.C. 2.4.2.7** (see Phosphoribosyltransferase, adenine)  
**E.C. 2.4.2.8** (see Phosphoribosyltransferase, hypoxanthine)  
**E.C. 2.6.1.1** (see Aminotransferase, aspartate)  
**E.C. 2.6.1.2** (see Aminotransferase, alanine)  
**E.C. 2.7.1.1** (see Kinase (phosphorylating), hexo-)  
**E.C. 2.7.1.73** (see Kinase (phosphorylating), inosine)  
**E.C. 2.7.1.82** (see Kinase (phosphorylating), ethanolamine)  
**E.C. 2.7.5.1** (see Phosphomutase, glucose)  
**E.C. 3.1.1.2** (see Esterase, aryl)  
**E.C. 3.1.1.4** (see Phospholipase A<sub>2</sub>)  
**E.C. 3.1.1.7** (see Esterase, acetyl choline)  
**E.C. 3.1.3.2** (see Phosphatase, acid)  
**E.C. 3.1.3.5** (see Nucleotidase, 5'-)  
**E.C. 3.1.3.19** (see Phosphatase, glycerol 2-)  
**E.C. 3.2.1.4** (see Cellulase)  
**E.C. 3.2.1.17** (see Lysozyme)  
**E.C. 3.2.1.20** (see Glucosidase, α-)  
**E.C. 3.2.1.21** (see Glucosidase, β-)  
**E.C. 3.2.1.22** (see Galactosidase, α-)  
**E.C. 3.2.1.23** (see Galactosidase, β-)  
**E.C. 3.2.1.24** (see Mannosidase, α-)  
**E.C. 3.2.1.26** (see Fructofuranosidase, β-)  
**E.C. 3.2.1.28** (see Trehalase)  
**E.C. 3.2.1.30** (see Acetylglucosaminidase, β-)  
**E.C. 3.2.1.31** (see Glucuronidase, β-)  
**E.C. 3.4.14.1** (see Cathepsin C)  
**E.C. 3.4.21.1** (see Chymotrypsin)  
**E.C. 3.4.21.4** (see Trypsin)  
**E.C. 3.4.21.8** (see Kalikrein)  
**E.C. 3.4.24.3** (see Collagenase)  
**E.C. 3.5.3.1** (see Arginase)  
**E.C. 3.5.4.9** (see Hydrolase, methenyltetrahydrofolate cyclo-)  
**E.C. 3.6.1.3** (see Phosphatase, adenosine tri-)  
**E.C. 3.6.1.5** (see Apyrase)  
**E.C. 4.1.1.26** (see Decarboxylase, aromatic amino acid)  
**E.C. 4.1.1.28** (see Decarboxylase, aromatic amino acid)  
**E.C. 5.3.1.9** (see Isomerase, glucose phosphate)  
**E.C. 6.3.3.2** (see Synthetase, methenyltetrahydrofolate)  
**α-Ecdysone** (see Cholest-7-en-6-one, 2,3,14,22,25-pentahydroxy-, (2β,3β,5β,22R)-)  
**α-Ecdysone, 20-hydroxy-** (see Cholest-7-en-6-one, 2,3,14,20,22,25-hexahydroxy-, (2β,3β,5β,22R)-)  
**β-Ecdysone** (see Cholest-7-en-6-one, 2,3,14,20,22,25-hexahydroxy-, (2β,3β,5β,22R)-)  
**Ecdysones** (see Moulting hormones)  
**Ecdysterone** (see Cholest-7-en-6-one, 2,3,14,20,22,25-hexahydroxy-, (2β,3β,5β,22R)-)  
**echidnina, *Laelaps***  
**Echidnophaga gallinacea**  
in Tanzania 2030  
on rodents, in Tanzania 2030  
**Echidnophaga myrmecobii**  
in Australia 46  
myxoma virus, transmission of 46  
on rabbit, in New South Wales 46  
**Echidnophaga tiscadaea**  
descriptions of 2870  
in Mongolia 2870  
**Echinocloa crus-galli, *Aedes vexans***  
oviposition sites associated with 2612  
**Echinonema cinctum**  
descriptions of 692  
in  
*Isoodon macrourus* 692  
*Locusta migratoria*, development of 692  
**Echinops telfairi, *Haemaphysalis simplicima***  
on, in Malagasy Republic 3060  
**Echinosorella**, gen. nov., description of 2770  
**Echinosorella echinosorex**, taxonomy of, transferred from *Lynxacarus* 2770  
**echinosorex, *Echinosorella* (*Lynxacarus*) *echinosorex*, *Lynxacarus*** (see *Echinosorella echinosorex*)  
**Ecklonia maxima, *Fucellia capensis*** on, development of 2439  
**Ecology**, book 3146  
**Ectiban** (see Permethrin)  
**Ecuador**  
*Aedeomyia squamipennis* in, viruses in 2629  
*Culex adamesi* in 584  
**ecuadoriensis, *Rhodnius***  
Eczema, in man, caused by *Dermanyssus americanus* 1670  
**Edema**, in man, caused by *Macrothylacia rubi* 690  
**Edentata, Phlebotominae** on, in Panama 2150  
**edentula, *Hoplopleura***  
**Edge Hill virus**, in, *Culicidae*, in New South Wales 2033  
**EF-3734** (see Dieldrin)  
**EF-4220** (see Dieldrin)  
**Eftolon** (see Sulfaphenazole)  
**Egg yolk**, diet component for, *Forcipomyia taiwana* 418  
**Egretta intermedia, *Blankaartia dohanyi*** on, in West Irian 981  
**Egypt**  
*Argas persicus* in, in fowl housing 718  
*Boophilus annulatus* in 2475  
*Culex* spp. in 2646  
*C. pipiens* in  
nematodes in 3293  
viruses in 2135  
Ixodidae in, on livestock 2752, 3394  
*Musca domestica* in, in cattle farms 477  
*M. sorbens* in, in cattle farms 477  
*Ornithodoros erraticus* in, viruses in 1950  
*Pediculus humanus* in, on man 2292  
*Rhipicephalus guilhoni* in, on goat 2756  
*R. turanicus* in, on goat 2756  
*Sarcoptes scabiei* in, on man 2776  
Scarabaeidae in, nematodes in 3374  
**Ehrlichia phagocytophila**  
in  
cattle, in Northern Ireland 946, 2212  
*Ixodes ricinus*, transmission of 946  
**Eichhornia, *Mansonia*** spp. associated with, in Kerala 2057  
**5,8,11,14,17-Eicosapentaenoic acid**, in *Culex pipiens* diet, permitting flight 3214

**5,8,11,14-Eicosatetraenoic acid**

(all-Z)-

in *Culex pipiens* diet, permitting flight 3214in *Culiseta incidens* diet, requirement for 1238in *Culiseta inornata* diet, requirement for 1238**8,11,14-Eicosatrienoic acid**, in *Culex pipiens* diet, permitting flight 3214**El Salvador***Anopheles albimanus* in 377, 846, 1816, 2127, 3243*A. pseudopunctipennis* in 843, 3237 malaria in 2127**EL-494** (see Benzamide, N-[[[5-(4-bromophenyl)-6-methylpyrazinyl]amino]-carbonyl]-2,6-dichloro-)**Elaphrus cupreus**

in France 3299

preying on, *Culicoides riethi* 3299**Electric conductivity**, in *Simulium* breeding water 2666**Electrophoresis**, for studying Culicidae 70**elegans, Laelaps****Elephant, African** (see *Loxodonta africana*)**Elephant (African) dung***Caccobius krikkeni* in, in Kenya 917*Onthophagus obliquus* in, in Kenya 917*Elephantulus rozeti*, *Leptotrombidium rheinwaldi* on, in Morocco 1977**Elgiva sundewalli**

in USA 3373

parasitised by, *Trichogramma* spp., in

New York State 3373

**Elliptorhina brunneri**

labium in, sensilla on 783

maxillae in, sensilla on 783

**Elm** (see *Ulmus*)**Elodea canadensis**, Culicidae and predators as affected by 1243**elongatus, Cubanochirus****Elsan** (see Phenthoate)**Emberiza elegans, Haemaphysalis japonica**

on, in Maritime Territory 2734

**Emberiza spodocephala, Haemaphysalis japonica** on, in Maritime Territory 2734**emergens, Amanella** (see *Cydistomyia emergens*)**emergens, Cydistomyia (Amanella)****Empididae**, pupae of 1348**Empidomermis rioxii**

sp. nov., description of 58

in, *Aedes detritus*, in France 58**Encephalitis**, in South-East Asia 2822**Encephalitis, California**

virus

in

*Aedes dorsalis*, effects on CO<sub>2</sub>

susceptibility of 615

*A. melanimon*effects on CO<sub>2</sub> susceptibility of

615

transovarial transmission of 2082

*A. triseriatus*, effects on CO<sub>2</sub>

susceptibility of 615

*Culex tarsalis*, effects on CO<sub>2</sub>

susceptibility of 615

**Encephalitis, eastern equine**

in Dominican Republic 3149

in New York State 1528, 1529

virus

in

*Culiseta melanura*, in New York

State 3246

equines, in Jamaica 845

man, in Jamaica 845

**Encephalitis, Japanese**

in Bangladesh 1562, 2371

virus

in

*Anopheles annularis*, in Philippines

3221

*A. barbirostris*, in West Bengal 2620*A. hyrcanus*, in West Bengal 2620

Ardeidae, in India 573

crow, in India 573

*Culex bitaeniorhynchus*, in

Philippines 3221

*C. quinquefasciatus*, in Taiwan 2032**Encephalitis, Japanese contd.**

virus contd.

in contd.

*Culex* contd.*C. tritaeniorhynchus*

in Honshu 3286

in Philippines 83, 3221

in Taiwan 2032

infectivity of, strain differences in

2951

isolating of 2950

transovarial transmission of 847

*C. vishnui*

in Philippines 83

in Taiwan 2032

in West Bengal 2620

*C. whitmorei*, in Andhra Pradesh

3276

Culicidae, in China 1827

duck, in India 573

man

in China 1827

in South Korea 2122

pig, in China 1827

*Toxorhynchites amboinensis*,

infectivity of 2883

isolation of, in mosquito cell lines

2950

vectors of, ecology of 3275

**Encephalitis, Murray Valley**

surveillance for 1772

virus, in, *Aedes aegypti*, transovarial

transmission of 1840

**Encephalitis, Russian spring-summer, virus,**

tick transmission of 3137

**Encephalitis, Saint Louis**

virus

in

*Aedes* spp., in Brazil 2898*A. albopictus*, transovarial

transmission of 1784

*A. epactius*, transovarial transmission

of 1784

birds, in Brazil 2898

*Culex* spp., in Brazil 2898*C. nigripalpus*, in Jamaica 845*C. pipiens*, transmission of, strain

differences in 396

*C. quinquefasciatus*, transmission of,

strain differences in 396

*C. tarsalis*, in California 2081, 3241

fowl, in California 2081

man

in California 2081

in Jamaica 845

*Mansonia pseudotitillans*, in Brazil

2898

*Mimus polyglottos*, in Jamaica 845*Passer domesticus*, in Indiana 1791*Sabethes belisarioi*, in Brazil 2898*Toxorhynchites amboinensis*,

infectivity of 2883

**Encephalitis, tick-borne**

review 1946

virus

control of

immunization against vectors for

3390

vector control for 716

hosts of 1946

in

*Clethrionomys glareolus*, strains of

3069

Culicidae, transmission of 3215

*Dermacentor* spp., transmission of

2733

*D. andersoni*, infectivity of, effects of

immunization on 3390

*D. marginatus*, in Kirgizia 1688*Haemaphysalis punctata*, in Kirgizia

1688

*Ixodes persulcatus*

in Kirgizia 1688

infectivity of 2732

transmission of 716, 2733

*I. ricinus*

strains of 3069

transmission of 233, 2233, 2733

Ixodidae, transmission of 3413

Ixodoidea, transmission of 924

man, in West Germany 233

tick transmission of 3137

vectors of 1946

**Encephalitis, Venezuelan equine, virus, in,**

Culicidae, in Peru 1828

**Encephalitis, western equine**

virus

in

*Aedes melanimon*, in California

2081

*A. pionips*, in Manitoba 1809*A. vexans*, in Manitoba 1809*Anopheles earlei*, in Manitoba 1809*Coquillettia perturbans*, in

Manitoba 1809

*Culex pipiens*, in California 2081*C. tarsalis*

in California 2081, 3241

in Manitoba 1809

transmission of, barriers to 2626

*Culiseta inornata*, in Manitoba 1809*C. melanura*, in New York State

3246

fowl, in California 2080, 2081

horse, in Utah 381

man, in California 2081

**Enderleinellus corrugatus**

in China 558

on *Callosciurus erythraeus*, in China 558**Enderleinellus dremomydis**

in China 558

on *Dremomys pernyi*, in China 558**Enderleinellus longiceps**

in USA 1189

on *Sciurus carolinensis*, in Tennessee

1189

seasonal abundance of 1189

**endius, Spalangia****Endosulfan** (6,7,8,9,10-hexachloro-1,5,5a,6,9,9a-hexahydro-6,9-methano-2,4,3-benzodioxathiepin 3-oxide)

against

*Glossina* spp. 1329*G. morsitans* 1089, 1327, 1330*G. pallidipes* 1089*G. palpalis* 1326, 1699, 1884*G. tachinoides* 1327, 2401, 2982

in Acacia woodland, effects on birds of

872

in aerial sprays, deposition of 2401

in fish, toxicity of 1327, 3005

in *Gambusia affinis*, toxicity of 2794in *Glossina morsitans*, effects on lipids of

2680

in river deltas, non-target effects of 3005

in swamps, non-target effects of 2163

non-target effects of 436

persistence of 1326, 1329, 1330

**Endrin** ((1 $\alpha$ ,2 $\beta$ ,2 $\alpha$ ,3 $\alpha$ ,6 $\alpha$ ,6 $\beta$ ,7 $\beta$ ,7 $\alpha$ )-3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-2,7,3,6-dimethanonaphth[2,3-b]oxirene)

against

*Psoroptes cuniculi* 2487*P. ovis* 2487**ensifera, Radfordia****ENT-numbers** (see A13-numbers)**Enterobacter aerogenes**, in, *Periplaneta**americana*, in Philippines 1727**Entobacterin-3** (see *Bacillus thuringiensis*var. *galleriae*)**Entomology**

in Australia, bibliography 2518, 2519,

2520, 2521, 2522, 2523

in Canada, book 2539

**Entomology, applied**, role of taxonomy in

2268

**Entomology, medical**

book 322, 539

index-catalogue of 1120, 1121

**Entomology, veterinary**

book 1152

index-catalogue of 1120, 1121

**entomophagus, Thyreophagus****Entomophthora**

in

Culicidae, in Ukraine 1025

*Musca autumnalis* 454**Entomophthora apiculata**

in

*Chrysomya chloropyga*, in Nigeria 202*Hemipyrrellia fernandica*, in Nigeria

202

*Musca domestica*, in Nigeria 202**Entomophthora aquatica**, taxonomy of,

holotype for 1563



- Entomophthora conglomerata**, in, Culicidae, in USSR 1019
- Entomophthora culicis**, in, Culicidae, in Ukraine 1025
- Entomophthora muscae**, in, *Musca domestica*, infectivity of, effects of humidity on 3031
- Entomophthorales**, in, *Phlebotomus sergenti*, in Algeria 2660
- Entomostroma**, preyed on by, *Procladius* spp., in Poland 1917
- Enzymes**, isoenzymes, use in medical entomology of 53
- Eomenacanthus stramineus** (see *Menacanthus stramineus*)
- Eothenomys**, Siphonaptera on, in Yunnan 568
- Eothenomys eleusis**, *Hystrichopsylla rotundisinuata* on, in Yunnan 2580
- Eothenomys melanogaster**
- Gahriepia lamella* on, in Anhui 294
- G. latiscutata* on, in China 3098
- Eothenomys miletus**, *Hystrichopsylla weida* in nests of, in Yunnan 569
- epactius**, *Aedes*
- epanastasis**, *Culex*
- Eperythrozoon ovis**, in, *Culex annulirostris*, transmission of 2129
- Ephemeral fever**, virus, in, livestock, in Australia 2652
- Ephemerella**, in rivers, as indicators of effects of insecticides 1292
- Ephemeroptera**
- fenethacarb in, toxicity of 1530
- in *Culicoides occidentalis* mating swarms, in California 2385
- in fresh water, effects of pyrethroids on 2157
- in rivers
- as indicators of effects of insecticides 1292
- effects of methoxychlor on 1281
- pyrethroids in, toxicity of 78, 876
- Ephestia kuehniella**, eyes in, isolating of pigment granules from 2448
- Ephydra**, predators of, detecting of 1483
- Ephydriidae**, *Culicinomyces clavosporus* in, pathogenicity of 1829
- Epicauta lemniscata**
- in USA 230
- on horse, diagnosis of poisoning by 230
- on sheep, diagnosis of poisoning by 230
- Epilachna varivestis**, control of, insecticides for 2264
- Epitedia faceta**
- in USA 1514, 2339
- in *Glaucomys volans* nests, in USA 2339
- on *Glaucomys volans*, avoidance of competition by 1514
- seasonal abundance of 2339
- Epizootic bovine abortion**, virus, research methods with 1471
- EPN** (*O*-ethyl *O*-(4-nitrophenyl) phenylphosphonothioate)
- in *Musca domestica*, metabolism of 206
- resistance to, in, *Musca domestica*, metabolism of 206
- EPNO** (see Phosphonic acid, phenyl-, ethyl 4-nitrophenyl ester)
- Epoxidase**, aldrin
- in Calliphoridae, induction of 2712
- in *Musca domestica*, inhibition by tyrosinase of 1371
- Eptesicus fuscus**, *Trypanosoma hedricki* in, in Ontario 2863
- equalis**, *Tabanus*
- equina**, *Hippobosca*
- equina**, *Wilhelmia* (see *Simulium equinum*)
- equinum**, *Simulium* (*Wilhelmia*)
- Equus asinus* (see Donkey)
- Equus caballus* (see Horse)
- Equus caballus* × *E. asinus* (see Mule)
- erberi**, *Hybomitra*
- Erethizon dorsatum**
- Malassezia pachydermatis* in, in New York State 2240
- Sarcoptes scabiei* on, in New York State 2240
- Eretmapodites**, in tree holes, in Kenya 2876
- Eretmapodites quinquevittatus**, Rift Valley fever, virus in, transmission of 2139
- Ergometrine**, in *Periplaneta americana*, effects on accessory reproductive glands of 339
- eridania**, *Spodoptera*
- erikssoni**, *Strobiloestrus*
- erimoense**, *Eusimulium* (see *Simulium erimoense*)
- erimoense**, *Simulium* (*Eusimulium*)
- erinacei**, *Caparinia*
- Erinaceus albigentris**, Astigmata on, in Kenya 2239
- Eristalis aeneus**
- in USA 1814
- in animal waste lagoons, effects of organic pollution on 1814
- Erithacus rubecula**, famphur in, toxicity of 3009
- erraticus**, *Ornithodoros*
- Erreze**, mounting medium for microarthropods 1149
- eruditus**, *Cheyletus*
- Erythema**
- Culicidae and 3215
- in man, caused by insect stings 1630
- in rabbit, caused by *Cheyletiella parasitivorax* 2774
- tick transmission of 3137
- erythrocephala**, *Boophthora* (see *Simulium erythrocephalum*)
- erythrocephala**, *Calliphora* (see *C. vicina*)
- erythrocephalum**, *Simulium* (*Boophthora*)
- Erythrosin B**
- against, *Musca domestica*, in fowl dung 191
- in fowl dung, not affecting *Hermetia illucens* 191
- erythrothorax**, *Culex*
- Esbjol** (see Allethrin, [1*R*-[1*α*(*S*\*),3*β*]]-)
- Escherichia coli**
- amino acids in, utilisation by *Aedes aegypti* of 2047
- in
- Blatta orientalis*, in UK 3157
- Diptera, in Brazil 479
- man, role in colitis of 980
- Rhyzopertha dominica* 1633
- Xenopsylla cheopis*, parenteral infection with 1515
- Eserine**, in *Triatoma infestans*, resistance of embryonic esterases to 1745
- Esterase**
- in *Aedes aegypti*, genetics of 3291
- in *Anopheles*, polymorphism of 1768
- in *Anopheles stephensi* salivary glands 74
- in *Babesia bigemina* 264
- in *Boophilus microplus*, cattle antienzymes to 2217
- in *Culex pipiens*, as indicator of insecticide resistance 2105
- in *Culex quinquefasciatus*
- genetics of 1221, 3281
- role in insecticide resistance of 2366
- role in organophosphate resistance of 2877
- role in temephos resistance of 2104
- in *Culex tarsalis*, isoelectric focusing of 122
- in Culicidae, determination of 3281
- pyrethroid degradation by 1445
- isoenzymes, in *Hyalomma*, use in taxonomy of 934
- Esterase, acetyl**
- in *Anopheles stephensi* salivary glands 74
- in *Triatoma infestans* 3169
- in *Triatoma infestans* embryo 1745
- Esterase, acetyl choline**
- in *Aedes aegypti* cell lines, ecdysterone stimulating activity of 3262
- in insects
- automated assay for 1448
- insecticide inhibition of 748
- in *Lucilia sericata*, carbamate inhibition of 2507
- in *Megoura viciae*, carbamate inhibition of 2507
- in *Periplaneta americana* central nervous system, diel changes in activity of 799
- in *Periplaneta americana* nervous system, effects of X-irradiation on 1169
- in rat, insecticide inhibition of 748
- Esterase, acetyl choline contd.**
- in *Triatoma infestans* eggs, activity pattern of 35
- in *Triatoma infestans* embryo, parathion inhibition of 1745
- organophosphate inhibition of 3135
- isoenzymes, in *Culex tarsalis* 3258
- Esterase, aryl**
- in *Anopheles stephensi* salivary glands 74
- in *Culex tarsalis*, properties of 2131
- in *Triatoma infestans*, parathion degradation by 3169
- in *Triatoma infestans* embryo 1745
- Esterase, carboxyl**
- in *Anopheles stephensi* salivary glands 74
- in *Musca domestica*, role in insecticide resistance of 1606
- in *Triatoma infestans* 3169
- in *Triatoma infestans* embryo, parathion inhibition of 1745
- Esterase, choline**
- in cattle, fenthion inhibition of 1590
- in cattle blood, famphur inhibition of 3329
- in fowl, effects of dichlorvos on 2564
- in human blood, organophosphate inhibition of 23
- in human plasma, malathion inhibition of 2952
- in man, organophosphate inhibition of 1684
- in *Musca domestica*, role in insecticide resistance of 1606
- in *Periplaneta americana* nervous system, effects of X-irradiation on 1169
- in rat, malathion inhibition of, effects of drugs on 750
- in *Triatoma infestans* eggs, activity pattern of 35
- in *Triatoma infestans* embryo, parathion inhibition of 1745
- insecticide inhibition of, in relation to selective toxicity 761
- Esterase, juvenile hormone**
- in *Musca domestica*, inhibitors of 2795
- in *Tenebrio molitor*, inhibitors of 2795
- in *Trichoplusia ni*, inhibitors of 2795
- Ethanaminium**, 2-(acetyloxy)-*N,N,N*-trimethyl-
- in insects
- receptors for 1159
- receptors in central nervous system for 1998
- in *Periplaneta americana*, effects on activity of head ganglia neurons of 2845
- in *Periplaneta americana* nervous system, effects of X-irradiation on 1169
- in rat brain, *Tityus serrulatus* venom causing release of 1677
- Ethane**, 1,1,1-trichloro-, for rapid killing of ants in soil samples 481
- 1,2-Ethanediamine**, *N*-[(4-methoxyphenyl)methyl]-*N*-2-pyridinyl- (see Mepyramine)
- 1,2-Ethandiol**, 1-(2,4,5-trichlorophenyl)-, in cattle, tetrachlorvinphos metabolite 1451
- Ethanesulfonic acid**, 2-amino-, in *Periplaneta americana*, effects on giant interneurone synapses of 2559
- Ethanethioamide**, in *Musca domestica*, development inhibition by 3356
- Ethanimidothioic acid**, *N*-[(methylamino)carbonyl]oxy-, methyl ester (see Methomyl)
- Ethanolamine kinase** (see Kinase (phosphorylating), ethanolamine)
- Ethene**, chloro-
- homopolymer
- genitalia vials made from tube of 1017
- insecticide-impregnated cattle ear tags of 2430
- slow-release insecticide formulations in 807
- Ethion** (*S,S'*-methylene bis(*O,O*-diethyl phosphorodithioate))
- resistance to, in
- Boophilus microplus*
- in New Caledonia 3068
- in South Africa 939

- Ethiopia**  
*Glossina* spp. in 1306  
 Ixodoidea in, book 951  
 malaria in 3195  
 trypanosomiasis in 1306
- Ethiopian region** (see Afrotropical region)
- Ethoate-methyl** (S-[2-(ethylamino)-2-oxoethyl] O,O-dimethyl phosphorodithioate)  
 against, *Musca domestica* 1893
- Ethyl hexanediol** (2-ethyl-1,3-hexanediol)  
 repellent for, Simuliidae, on cattle 1288
- Eublaberus posticus**, digestive enzymes in 1161
- Eubrachylaelaps rotundus**  
 in Brazil 2491  
 on *Akodon arviculoides*, in Brazil 2491
- Eucalliphora lilaea**  
 enzymes in 2712  
 insecticide susceptibility in, role of microsomal oxidase in 2712
- Eucheyletia bishoppi**  
 in USA 509  
 on *Sorex pacificus*, in Oregon 509  
 on *Sorex throwbridgii*, in Oregon 509
- Eucoila impatiens**  
 parasitising  
*Lucilia cuprina* 480  
*Musca domestica* 480
- Eucorethra underwoodi**  
 habitats of 672  
 in Canada 672
- Eudasyphora**  
 key 683  
 taxonomy of, *Dasyphyrellia* as synonym of 683
- Eudyptes pachyrhynchus**, *Leucocytozoon* tawaki in, in New Zealand 142
- euedes, Aedes**
- Eufilaria**  
 taxonomy of  
 characters distinguishing *Chandlerella* and 1573  
 characters distinguishing *Splendofilaria* and 1573
- Eufilaria bartlettiae**  
 sp. nov., description of 1573  
 in  
*Culicoides nubeculosus*, development of 1573  
*Turdus merula*, in France 1573
- Eufilaria delicata**  
 descriptions of 1573  
 in  
*Culicoides nubeculosus*, development of 1573  
*Turdus merula*, in France 1573
- Euglenophyta**, eaten by *Simulium* larvae 1037
- Eugregarina**, in, insects 3136
- Euhoplopsyllus glacialis lynx**  
 in USA (Alaska) 2322  
 on *Lynx canadensis*, in Alaska 2322  
*Pasteurella tularensis* in, in Alaska 2322
- Eulaelaps**, on *Mus musculus*, in Crimea 1060
- Eulaelaps stabularis**  
 blood-meals in, identification of 1954  
 in Hungary 2244  
 in USA 289, 2302  
 in USSR 1046, 3389  
 in *Apodemus agrarius* burrows 1954  
 on *Didelphis virginiana*, in Oregon 2302  
 on Rodentia, in Maritime Territory 3389  
 on *Scapanus townsendi*, in Oregon 289
- Eumenidae**  
 in British Isles 691  
 in Malta 1384
- eupeus, Buthus** (see *Mesobuthus eupeus*)  
**eupeus, Mesobuthus** (*Buthus*)
- Euproctis**, control of, insecticides for 2792
- Euproctis chrysorrhoea**  
 control of, insecticides for 3377  
 in UK 3377  
 in railway embankments, in England 3377
- Eurax** (see *Crotamiton*)
- Euroglyphus maynei**  
 in UK 1975  
 in bedding, in UK 1975  
 on man, hypersensitivity to 923
- Europe**  
 cattle in, ticks and tick-borne diseases 1948  
 sheep in, ticks and tick-borne diseases 1948  
 tick-borne encephalitis in 1946
- Europe, central**  
 Heteroptera in, on man 803  
 Siphonaptera in, on man 820
- Europium**, marker for, *Glossina* spp. 2681
- Eurycotis floridana**, sternal glands in 337
- Euryparasitus**  
 in rodent nests, in Transbaikalia 1032  
 on moles, in Oregon 289
- eurysternus, Haematopinus**
- Euschoengastia striata**  
 in China 997, 2760  
 on Rodentia, in Kiangsu 2760  
 seasonal abundance of 997
- Eusimulium**  
 chromosomes in 1579  
 taxonomy of 1579
- Eusimulium angustitarse** (see *Simulium angustitarse*)
- Eusimulium aureum** (see also *Simulium aureum*)  
 in Guatemala 144  
 pathogens of, in Guatemala 144
- Eusimulium brachyantherum** (see *Simulium brachyantherum*)
- Eusimulium brevidens** (see *Simulium brevidens*)
- Eusimulium codreanui** (see *Simulium codreanui*)
- Eusimulium costatum** (see *Simulium costatum*)
- Eusimulium crenobium** (see *Simulium crenobium*)
- Eusimulium erimoense** (see *Simulium erimoense*)
- Eusimulium latipes** (see *Simulium latipes*)
- eusoricis, Hirstionyssus**
- eustrigata, Calyptra**
- Eutamias minimus**  
 Colorado tick fever, virus in, in Colorado 1403, 3406  
*Dermacentor andersoni* on, in Colorado 1403, 3406
- Eutamias umbrinus**, Colorado tick fever, virus in, in Colorado 3406
- Eutrombicula**  
 habitats of 2811  
 in West Malaysia 2811
- Eutrombicula alfreddugesi**  
 in USA 3145  
 on *Sylvilagus floridanus*, in Indiana 3145
- Eutrombicula batatas**  
 hosts of 982  
 in USA 982  
 on man, in Arizona 982
- Evania appendigaster**, parasitising, *Periplaneta americana* 788
- evertsi, Rhipicephalus**
- ewingi, Geomydoecus**
- Exanthema**  
 in man  
 caused by arboviruses 1826  
 caused by *Dermanyssus gallinae* 2242
- excavatum, Hyalomma anatolicum**
- excrucians, Aedes**
- Exhaust gases**, anesthetic for *Cochliomyia hominivorax* 2434
- Exhyalanthrax**  
 in Arabian Peninsula 2532  
 parasitising, *Glossina* spp. 437
- exigua, Haematobia irritans**
- exigua, Lyperosia** (see *Haematobia irritans* *exigua*)
- exiguum, Simulium**
- exilis, Listrophoroides**
- eximia, Lucilia** (*Phaenicia*)
- eximia, Phaenicia** (see *Lucilia eximia*)
- expollicata, Hybomitra**
- exsecta, Formica**
- extincta, Acanthocera**
- Eyelid diseases**  
 in man  
 caused by *Demodex folliculorum* 1415  
 role of *Demodex* in 1666
- fabae, Aphis**
- faceta, Epitedia**
- fagineus, Culicoides**
- fahrenheitzi, Androlaelaps**
- Fahrenheitzia**, on small mammals, in Mexico 1465
- faini, Araeopsylla**
- Falco mexicanus, Ornithodoros concanensis**  
 on, in Alberta 954
- Falcon, prairie** (see *Falco mexicanus*)
- Fallow fields, Psorophora columbiae** in, mapping of 3278
- Famphur** (O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl phosphorothioate)  
 against  
*Cephenemyia trompe*, on reindeer 3008  
*Hypoderma bovis*, on cattle 3329  
*H. lineatum*, on cattle 3329  
*Oedemagena tarandi*, on reindeer 3008  
 in birds, poisoning by 3009  
 in cattle, cholinesterase inhibition by 3329
- Fannia canicularis**  
 attraction of, to hornet nests 1631  
 control of 199  
 growth regulators for 2428  
 insecticides for 1140  
 descriptions of 160  
 in USA 1631  
 taxonomy of  
 characters distinguishing *F. manicata* and 160  
 characters distinguishing *F. scalaris* and 160
- Fannia manicata**  
 descriptions of 160  
 taxonomy of  
 characters distinguishing *F. canicularis* and 160  
 characters distinguishing *F. scalaris* and 160
- Fannia scalaris**  
 descriptions of 160  
 taxonomy of  
 characters distinguishing *F. canicularis* and 160  
 characters distinguishing *F. manicata* and 160
- Fanniidae**, taxonomy of 905
- farauti, Anopheles**
- Farhangia**, gen. nov., description of 2306
- Farhangia celebensis**, taxonomy of, transferred from *Pygiopsylla* 2306
- fariai, Telenomus**
- farinae, Aleurobius** (see *Acarus siro*)
- farinae, Dermatophagoides**
- farinae, Tyroglyphus** (see *Acarus siro*)
- Farm buildings, Musca domestica** in, in Italy 657
- Farming**, mosquito breeding sites as affected by 852
- fasciatus, Ceratophyllus** (see *Nosopsyllus fasciatus*)
- fasciatus, Nosopsyllus** (*Ceratophyllus*)
- fasciolatus, Tityus trivittatus**
- fascipennis, Culicoides**
- farinae, Culex** (see *C. quinquefasciatus*)
- fatigans, Culex pipiens** (see *C. quinquefasciatus*)
- Fats**, in *Glossina pallidipes* adults, variation in 1313
- Fatty acids**  
 in *Argas arboreus*, developmental changes in 2757  
 in *Blattella germanica* tergal-gland secretion 784  
 in *Boophilus decoloratus* eggs 2210  
 in *Dermacentor andersoni*, developmental changes in 2757  
 in *Glossina palpalis* 2402  
 in *Solenopsis invicta* post-pharyngeal glands 2203
- Feedstuffs**, production from animal wastes of 2710
- felicia, Wyeomyia**
- Felicola subrostratus**  
 in Hungary 2012  
 on cat, in Hungary 2012
- Felicola vulpis**  
 in Hungary 2012  
 on *Microtus arvalis*, in Hungary 2012
- Felis catus** (see Cat)
- felis, Ctenocephalides**
- Felis domesticus** (see Cat)
- Fenchlorphos** (O,O-dimethyl O-(2,4,5-trichlorophenyl) phosphorothioate)



- Fenclorophos contd.**  
 against  
*Alphitobius diaperinus*, in fowl housing 687  
*Cheyletiella* spp.  
   on cat 1965  
   on dog 1965  
*Cochliomyia hominivorax* 1362  
*Demodex canis*, on dog 2766  
*Haematobia irritans*, on cattle 470  
*Knemidokoptes pilae*, on budgerigar 1663  
 Simuliidae, on cattle 1289  
 resistance to, in, *Demodex canis*, in Queensland 2766
- Fenethacarb** (3,5-diethylphenyl methylcarbamate)  
 against, *Culicidae* 1235  
 non-target effects of 1235, 1530
- Fenitrothion** (*O,O*-dimethyl *O*-(3-methyl-4-nitrophenyl) phosphorothioate)  
 against  
*Aedes aegypti* 2640  
*A. cantans* 828  
*Anopheles* spp. 3194  
*A. annularis* 1775  
*A. balabacensis* 2055  
*A. culicifacies* 1775, 2382, 3218  
*A. nigerrimus* 1775  
*A. pulcherrimus* 1775  
*A. stephensi* 1775, 2640  
*A. subpictus* 1775, 2640  
*Armigeres subalbatus* 2640  
*Blattaria* 788  
*Culex molestus* 401  
*C. quinquefasciatus* 2640  
*C. sitiens* 2640  
*C. tritaeniorhynchus* 2640  
*C. whitmorei* 2640  
*Culicidae* 1712  
*Culicoides barbosa* 626  
*C. furens* 626  
*Musca domestica* 528  
*Rhodnius prolixus*, in dwellings 561  
*Sarcoptes scabiei*, on camel 3093  
*Stivalius cognatus* 565, 1190  
   on *Rattus* 3188  
*Xenopsylla cheopis* 565, 1190  
   on *Rattus* 3188  
 on walls, persistence of 401  
 resistance to, in  
   *Anopheles culicifacies*  
     in Gujarat 2382  
     in Maharashtra 2382  
   *Boophilus microplus*, in South Africa 939  
   *Culex pipiens* 2604  
 with malathion, and pyrethrins, against, *Alphitobius diaperinus*, in fowl housing 687  
 with trichlorphon, against, *Culex pipiens* 2604
- Fenpropathrin** (cyano(3-phenoxypheyl)methyl 2,2,3,3-tetramethylcyclopropanecarboxylate)  
 in *Periplaneta americana*, neurotoxicity of 3435
- Fensulfthion** (*O,O*-diethyl *O*-(4-(methylsulfinyl)phenyl) phosphorothioate)  
 WHO data sheet on 3121
- Fenthion** (*O,O*-dimethyl *O*-[3-methyl-4-(methylthio)phenyl] phosphorothioate)  
 against  
*Aedes aegypti* 2640  
*A. dorsalis* 3210  
*A. melanimon* 3210  
*A. vexans* 2040  
*Anopheles annularis* 1775  
*A. culicifacies* 1775, 3218  
*A. pulcherrimus* 1775  
*A. stephensi* 1775, 2640  
*A. subpictus* 2640  
*Armigeres subalbatus* 2640  
*Culex pipiens* 2040  
*C. quinquefasciatus* 2640, 3269  
*C. sitiens* 2640  
*C. tritaeniorhynchus* 2640  
*C. whitmorei* 2640  
*Culicidae* 1713  
*Hypoderma* spp., on cattle 2689  
*H. bovis*, on cattle 1590  
*Mansonia annulifera* 2057
- Fenthion contd.**  
 against contd.  
*Mansonia* contd.  
*M. uniformis* 2057  
*Rhodnius prolixus* 2573  
 in cattle  
   residues of 1590  
   toxicity of 1590  
 in pastures, non-target effects of 3210  
 in vertebrates, toxicity of 1713  
 resistance to, in  
   *Anopheles subpictus*, in Pakistan 1775  
   *Culex pipiens* 2604  
   *C. quinquefasciatus* 1221  
   *Culicidae*, in Utah 3212  
 with trichlorphon, against, *Culex pipiens* 2604
- Fenthion-ethyl** (see Phosphorothioic acid, *O,O*-diethyl *O*-[3-methyl-4-(methylthio)phenyl] ester)
- Fentin acetate** ((acetyloxy)triphenylstannane)  
 in *Musca domestica*, effects on ovarian development of 473  
 review 3125
- Fentin chloride** (chlorotriphenylstannane)  
 review 3125
- Fentin hydroxide** (hydroxytriphenylstannane)  
 in *Musca domestica*, effects on ovarian development of 473  
 review 3125
- Fenvalerate** (cyano(3-phenoxypheyl)methyl 4-chloro- $\alpha$ -(1-methylethyl)benzeneacetate)  
 against  
*Aedes aegypti* 1810  
*Alphitobius diaperinus*, in fowl housing 687  
*Anopheles quadrimaculatus* 1193  
*Blattella germanica* 657, 1144, 1440  
*Calliphora vicina* 1440  
*Chironomidae* 3346  
*Culicidae* 78, 2111  
*Haematobia irritans*, on cattle 2422, 3010  
*Musca domestica* 657, 1144  
*Ornithonyssus sylviarum*, on fowl 1953  
*Panstrongylus megistus* 1507  
*Psorophora columbiae* 1193  
*Rhipicephalus appendiculatus* 699  
 in cattle ear tags 2422, 3010  
 in insects, physiological effects of 1444  
 in *Periplaneta americana*, neurotoxicity of 3435  
 isosteres of, insecticidal activity of 1985  
 resistance to, in, *Culex quinquefasciatus* 2353  
 synergists for, piperonyl butoxide as 1193
- fernandica, Hemipyrellia ferox, Psorophora ferrisi, Solenopotes ferruginata, Coproica** (see *Leptocera ferruginata*)
- ferruginata, Leptocera (Coproica)**
- Fertilizers**  
 for rice, effects on *Chironomidae* of 1624  
 mosquitoes as affected by 2128  
 with insecticides 2942
- festai, Ixodes**
- Fever**  
 in *Bos taurus*  $\times$  *B. indicus*, caused by *Chrysomya bezziana* 663  
 in man, caused by arboviruses 1826
- Ficam** (see Bendiocarb)
- Fiji**  
*Aedes* spp. in 412, 1236  
*Culex* spp. in 412  
*Culicoides brevitarsis* in, natural enemies of 2659  
 mosquito control in 412  
*Psoroptes* spp. in, on goat 1658
- Filaria**, in Philippines 2804
- Filarioidea**, in, *Culicidae*, transmission of 3225, 3284
- filicinus, Culicoides**
- Films, unimolecular**  
 for mosquito control 373  
 of lecithins, against, *Anopheles* spp. 854
- finetarius, Aphodius**
- Finland**  
*Cephenemyia trompe* in, on reindeer 3008  
 Coleoptera in, in cattle dung 490  
*Culicidae* in 2957  
 Cyclorrhapha in 2344  
 Diptera in, in carrion 3364  
 entomological literature from 2797  
*Oedemagena tarandi* in, on reindeer 3007, 3008  
*Rhipicephalus sanguineus* in, on dog 3400  
 Simuliidae in 1577  
*Sphaeridium* spp. in, in dung 1928
- Finlaya**, in tree holes, in Kenya 2876
- Fish**  
*Bacillus thuringiensis* in, pathogenicity of 2086  
 deltamethrin in, toxicity of 2982  
 endosulfan in, toxicity of 1327, 3005  
 in rivers, effects of methoxychlor on 1281, 1284  
 methoxychlor in  
   residues of 1274, 1276  
   toxicity of 2980  
 permethrin in, toxicity of 2713  
 phenothiazine in, toxicity of 1012  
 preying on  
   *Culex tritaeniorhynchus*  
     in Japan 1226  
     in Kyushu 99  
   *Culicidae*  
     and biological control using 3272  
     in China 1827  
     Simuliidae, in USSR 1045  
   SIR-8514 in, toxicity of 1014  
   temephos in, residues of 1691
- Fish meal**, bait component for, *Musca domestica* 3017
- fissicornis, Onthophagus fitchii, Aedes**
- Fitios** (see Ethoate-methyl)
- Flagellates**, in, insects 3136
- Flanders virus**  
 in  
   *Culex* spp., in Indiana 2900  
   *C. pipiens*, in New York State 3246
- flava, Haemaphysalis flavicornis, Limnephilus flavicollatus, Lutzomyia**
- Flavivirus**, in, *Culicidae*, in French Guiana 1154
- Flavobacterium indothelicum**  
 in  
   *Argas persicus*, in Pakistan 247  
   poultry, pathogenicity of 247
- flavopictus, Aedes flavopilosa, Vespula flavus, Culicoides griseocens**
- Flea** (see Siphonaptera)
- Flea collars**, for cat, problems caused by 2026
- Flea infestations**  
 in cat 365, 1417, 2325, 2872  
 in dog 1417, 2028, 2584, 2872  
 in fowl 1493, 2564  
 in goat 47  
 in guinea fowl 1493  
 in man 48, 52, 566, 820, 1417, 2316, 2341, 2584, 2837, 2865  
 in mouse 567, 2871  
 in rabbit 46, 2323, 2324, 2335, 2336, 2869  
 in sheep 47
- fletcheri, Leptotrombidium**
- Flit MLO**, against, *Culex quinquefasciatus*, in pig waste 374
- Flood-control systems**  
*Chironomidae* in, in California 2413, 3346  
 midge control in 2413
- florenciae, Culicoides floridolus, Tarsonemus**
- Florida**  
*Aedes aegypti* in, natural enemies of 65  
*A. taeniorhynchus* in, natural enemies of 2077  
*Amblyomma americanum* in 3059  
*Anopheles crucians* in, natural enemies of 2046  
*Chironomidae* in 1366, 1905  
 on man 912

**Florida contd.**

- Chironomus attenuatus* in, natural enemies of 3342
- Culex nigripalpus* in 371, 2609  
in sewage systems 373  
sporozoites in 837
- C. quinquefasciatus* in, in sewage systems 373
- Culicoides* spp. in 131
- C. mississippiensis* in 1842
- Geomydoecus* spp. in, on *Thomomys* 1171
- Goeldichironomus holoprasinus* in, natural enemies of 3342
- Musca domestica* in 3371  
in animal housing 455  
in cattle farms 367  
in pig farms 367
- Solenopsis invicta* in 918, 1387, 3384
- Stomoxys calcitrans* in 904, 3352  
in cattle farms 367
- Tabanus aranti* in 1597
- floridana, Eurycotis**
- Flower vases, *Aedes aegypti* in, in Fiji 412
- Fluorescein**  
marker for  
*Cochliomyia hominivorax* 1133  
*C. macellaria* 1133
- Fluorescence**, of *Musca domestica*, relation of linoleic acid and 2172
- Fluorescent antibody technique**  
for detecting bluetongue virus in *Culicoides* 627  
for detecting dengue virus in *Toxorhynchites amboinensis* 2883
- fluviatilis, Anopheles**
- Fly pupae, diet component for, *Solenopsis invicta* 482
- Flying squirrel, southern (see *Glaucomys volans*)
- FMC 30980 (see Cypermethrin)
- FMC 35171 (see Permethrin, (1RS-cis)-)
- FMC 45497 (see Cypermethrin, (1RS-cis)-)
- FMC 45498 (see Cyclopropanecarboxylic acid, 3-(2,2-dibromoethenyl)-2,2-dimethyl-, cyano(3-phenoxyphenyl)methyl ester, [1R-[1a(S\*),3a]]-)
- foederatus, Polistes**
- foersteri, Aneuropria**
- folliculorum, Demodex**
- fontinella, Cuterebra**
- Food-processing factories, pest control in, insecticides for 1143
- Foodstuffs**  
arthropod pests of, book 322  
pesticides in, residues of 529, 3128
- Forcipomyia**  
Japanese encephalitis, virus in, in China 1827  
mouthparts in 3300
- Forcipomyia sibirica**, taxonomy of, characters distinguishing *F. taiwana* and 865
- Forcipomyia taiwana**  
biology of 418  
descriptions of 865  
in China 418  
rearing of, techniques for 418  
taxonomy of, characters distinguishing *F. sibirica* and 865
- Forcipomyia townsvillensis, Onchocerca gibsoni** in, transmission of 2654
- Forest clearings**  
*Aedes aegypti* in, in Nigeria 1194  
*A. africanus* in, in Nigeria 1194
- Forest fires**, Ixodidae as affected by 3411
- Forest pests**  
control of, insecticides for 1218  
pathogens of, role in population dynamics of 2839
- Forests**  
*Culicidae* in, in Ryukyu Islands 1217  
*Haemagogus* spp. in, in Brazil 2627  
*Ixodes trianguliceps* in, in Udmurt ASSR 977  
medically-important arthropods in, book 1151  
mosquito control in 2918, 2919  
pest management in, book 2833
- Forests, alder**  
Ceratopogonidae in, in Belorussia 1058  
*Culicidae* in, in Belorussia 1058

- Forests, broad-leaved foothill**,  
*Haemaphysalis japonica* in, in Maritime Territory 2734
- Forests, cedar-broad-leaved, Haemaphysalis japonica** in, in Maritime Territory 2734
- Forests, coniferous, Haemaphysalis japonica** in, in Maritime Territory 2734
- Forests, fir, Culicidae** in, in Belorussia 841
- Forests, floodplain**  
*Culicidae* in, in Belorussia 841  
*Hybomitra lasiophthalma* in, in Texas 906
- Forests, gallery** (see Forests, riverine)
- Forests, hardwood, Tabanus** spp. in, flight paths of 2440
- Forests, larch, Ixodes trianguliceps** in, in Ukraine 2736
- Forests, littoral oak, Haemaphysalis japonica** in, in Maritime Territory 2734
- Forests, marsh, Ixodes trianguliceps** in, in Ukraine 2736
- Forests, oak**  
Ceratopogonidae in, in Belorussia 1058  
*Culicidae* in, in Belorussia 1058
- Forests, riverine**  
*Aedes africanus* in, in Central African Republic 2066  
*A. opok* in, in Central African Republic 2066  
*Glossina morsitans* in, in Niger 1327  
*G. palpalis* in  
in Ivory Coast 2986, 2987  
in Upper Volta 435, 873, 1088, 1323, 1324, 1326, 1875, 1884, 3004  
resting places of 1698  
*G. tachinoides* in  
in Ivory Coast 2986, 2987, 2988  
in Niger 1327  
in Upper Volta 435, 1875, 2982  
resting places of 1698  
tsetse control in, aerial sprays for 2401
- Forests, spruce-fir, Haemaphysalis japonica** in, in Maritime Territory 2734
- Forests, tropical**  
*Culicidae* in, effects of temperature on 2283  
Phlebotominae in, effects of temperature on 2283
- Forficula auricularia**, activity in, rhythm of 315
- Formaldehyde**, attractant for, *Glossina* spp. 1881
- Formica**, insecticides on, persistence of 203
- Formica**, helminths in, in Uzbekistan 316
- Formica cinerea armenica**  
biology of 1068  
*Dicrocoelium dendriticum* in, in North Ossetia 1068  
in USSR 1068
- Formica cunicularia**  
control of 2727  
*Dicrocoelium lanceolatum* in, in France 2727  
in France 2727  
nests of 2727
- Formica exsecta fukaii**  
prey of, defence mechanisms of 2846  
preying on, *Periplaneta* spp. 2846
- Formica gagates**  
*Dicrocoelium dendriticum* in, in Yugoslavia 688  
in Yugoslavia 688
- Formica mesasiatica**  
*Dicrocoelium dendriticum* in, in Kirgizia 3053  
in USSR 3053
- Formica nigricans**  
control of 2727  
*Dicrocoelium lanceolatum* in, in France 2727  
in France 2727  
nests of 2727
- Formica picea** (see *F. transcaucasica*)
- Formica rufibarbis**  
biology of 1068  
*Dicrocoelium dendriticum* in, in North Ossetia 1068  
in USSR 1068
- Formica transcaucasica**  
biology of 1068  
*Dicrocoelium dendriticum* in, in North Ossetia 1068  
in USSR 1068
- Formicidae**  
on man, hypersensitivity to 2132
- Salmonella newport* in, in Uttar Pradesh 795
- venoms of, toxicity to mouse of 2205
- formosus, Aedes aegypti**
- Formothion** (S-[2-(formylmethylamino)-2-oxoethyl] O,O-dimethyl phosphorodithioate)  
against, *Musca domestica* 1893
- Fort Morgan virus**  
characterisation of 2219  
in  
*Oeciacus vicarius*  
in Colorado 1749, 2219  
in South Dakota 1749  
transmission of 563  
*Passer domesticus*, in Colorado 2219  
*Petrochelidon pyrrhonota*, in Colorado 2219
- fossor, Aphodius**
- fotus, Thrassis**
- foulki, Leptoconops**
- Fowl (Gallus domesticus)**  
*Aedes sierrensis* on, feeding by 2100  
*Amblyomma americanum* on, rearing of 2467  
Argasidae on, in Iran 2211  
arthropod parasites of, in Nigeria 1493  
*Culex* spp. on, in India 573  
*Dermanyssus gallinae* on, carotenoids in 800  
dichlorvos in, toxicity of 2564  
*Hyalomma marginatum* on, development of 244  
insect growth regulators in, residues of 2428  
insecticides in, residues of 1430  
*Knemidokoptes mutans* on, in Indonesia 2806  
Mallophaga on, in Spain 340  
*Menopon gallinae* on, carotenoids in 800  
*Mycoplasma gallisepticum* in, tick transmission of 1029  
*Ornithocoris toledoi* on, feeding by 1747  
*Ornithonyssus sylvium* on  
acquired immunity to 2764  
in California 1953  
in Pakistan 731  
pest control on  
dichlorvos for 2564  
phosalone for 2562
- Phthiraptera** on  
in Afrotropical region, book 1177  
in Nigeria 2013
- Rhodnius pallescens* on, in Panama 2576
- Saint Louis encephalitis, virus in, in California 2081
- western equine encephalitis, virus in, in California 2080, 2081
- Fowl carcasses**  
*Chrysomya megacephala* in, in Hawaii 480
- Lucilia cuprina* in, in Hawaii 480
- Fowl dung**  
fly control in  
insect growth regulators for 2428, 2436, 3012  
insecticides for 2703  
*Hermetia illucens* in, not affected by erythrosin B 191  
*Musca domestica* in  
in Indiana 3012  
in Mississippi 191
- Fowl eggs**  
diet component for, *Solenopsis invicta* 482  
insect growth regulators in, residues of 2428
- Fowl feed**  
insect growth regulators in, for fly control in dung 2428, 3012  
permethrin in, for fly control in dung 2703
- Fowl housing**  
*Alphitobius diaperinus* in  
in Austria 687  
in Japan 2204  
*Argas persicus* in  
in Armenia 1718  
in Egypt 718  
*Cimex lectularius* in, in Armenia 1718  
mosquito control in, insecticides for 1827



- Fowl housing contd.**  
 pest control in, insecticides 687  
*Rhodnius pallescens* in, in Panama 2576
- Fowl meat, naled in, uptake from air of** 2266
- Fox**  
*Haemaphysalis flava* on, in Honshu 3085  
 mite control on, acaricides for 728
- Fox, red (see *Vulpes vulpes*)**
- France**  
*Aedes detritus* in 3297  
 natural enemies of 58  
*A. dorsalis* in 2052  
*Anopheles* spp. in, introductions of 3200  
*A. claviger* in 3199  
*A. maculipennis* in 3199  
*Bubas* spp. in, in cattle pastures 2207  
 canine leishmaniasis in 132, 134  
*Culex pipiens* in 2886, 3297  
 Culicidae in 1709  
*Culicoides* spp. in 1574  
 natural enemies of 3299  
*C. circumscriptus* in 1251  
*Demodex folliculorum* in, on dog 1665  
*Dermacentor reticulatus* in 2743  
 Diptera in, on cattle 223  
*Formica cunicularia* in, trematodes in 2727  
*F. nigricans* in, trematodes in 2727  
*Haematopota* spp. in 17  
*Ixodes ricinus* in 2743  
 on *Clethrionomys* 3392  
*Ixodoidea* in, on sheep 320  
 malaria in 3198  
*Melophagus ovinus* in, on sheep 320  
 mosquito control in 832, 2954, 2955, 3265, 3266  
 Phlebotominae in 2967  
*Phlebotomus ariasi* in 132, 134, 636, 2149  
*P. mascittii* in 2149  
*Pyemotes zwoelferi* in, on man 1967  
 Scarabaeidae in 2208  
 in dung 919  
 Sciomyzidae in 1349  
*Simulium* spp. in 426  
 Siphonaptera in, on rabbit 2335  
*Sphaeridium* spp. in, in dung 1928  
 Tabanidae in 217  
 natural enemies of 659  
 on horse 2185, 3034  
*Tabanus darimonti* in 3368  
 tick-borne encephalitis in 1946
- franciscanus, *Anopheles***  
*Francisella tularensis* (see *Pasteurella tularensis*)
- Fratercula arctica*, *Ixodes uriae* on, in** Norway 702
- freeborni, *Anopheles***
- French Guiana**  
*Culex adamesi* in 584  
 Culicidae in 2358  
 insect-transmitted diseases in 1154  
*Lutzomyia* spp. in 2390  
*L. clausenae* in, on man 139  
*L. umbratilis* in  
 flagellates in 2969  
 on man 140, 2969  
 Phlebotominae in, on man 422  
*Psorergatoides* spp. in, on bats 736
- French Polynesia**  
*Boophilus annulatus* in, on cattle 1943  
*Rhipicephalus sanguineus* in  
 on cattle 1943  
 on dog 1943
- French West Indies, heartwater in** 958  
*Amblyomma variegatum* in 958
- frete, *Meoneura***  
*frici*, *Schoutedenichia*  
*fringillina*, *Ornithomya*  
*frisiae*, *Zygoribatula*
- Frog, *Vespa orientalis* mid-gut extracts in,** effects on neuromuscular junctions of 483
- froggatti, *Sarcophaga***  
*frontalis*, *Frontopsylla*  
*Frontopsylla frontalis baibacina*  
 ssp. nov., description of 567  
 in China 567  
 on birds, in China 567  
 on *Marmota himalayana*, in China 567
- Frontopsylla frontalis utia***  
 ssp. nov., description of 567
- Frontopsylla frontalis utia* contd.**  
 in China 567  
 on *Marmota caudata*, in China 567
- Frontopsylla luculenta***  
 in USSR 1026  
 on *Microtus brandti*, in Transbaikalia 1026
- Fructofuranosidase,  $\beta$ -**  
 in *Periplaneta americana* mid-gut, regulation of activity of 2840  
 in *Sarcophaga albiceps* mid-gut 3014
- D-Fructose**  
 in *Phormia terraenovae*, receptors for 910  
 in *Psorophora ferox* 1208  
*Musca autumnalis* feeding responses to 474
- frugiperda, *Spodoptera***
- Fruit (stored)**  
 dichlorvos in, uptake from air of 2267  
 naled in, uptake from air of 2267
- Fucellia capensis***  
 biology of 2439  
 in South Africa 2439  
 on *Ecklonia maxima*, development of 2439
- Fuchsin, marker for, Siphonaptera** 360
- fukaii, *Formica exsecta***
- fulgens, *Aedes***  
*fuliginosa*, *Periplaneta*  
*fuliginosus*, *Chrysops*  
*fulvipes*, *Heterometrus*  
*fulvus*, *Oniticellus*
- Fumigants**  
 in foodstuffs, residues of 3128  
 substances tested as: citral 3124
- Funambulus pennanti*, *Neohaematopinus***  
*gadrii* on, in Pakistan 3165
- Fundulus heteroclitus*, preying on, Culicidae,** in New Jersey 3207
- Fundulus luciae*, preying on, Culicidae, in** New Jersey 3207
- funebria, *Drosophila***  
*funestus*, *Anopheles*
- Fungi**  
 in  
 Culicidae 2837  
 review 1783  
 insects, defence mechanisms against 544  
 invertebrates, role in population dynamics of 2839  
 medically-important arthropods, bibliography 2517  
 Simuliidae, in Ukraine 1055  
*Solenopsis* spp., in Brazil 1627  
 Tabanidae  
 in France 659  
 in USSR 3040, 3336  
 insect control using 3118  
 non-target effects of 2258  
 review 1680  
 mosquito control using 3194  
 pesticides in, penetration of 2503
- Fungicides**  
 bioassay of, review 1455  
 in rice-fields, not affecting Chironomidae 1624  
 use of, in South Africa 1984
- Fungus** 544, 659, 1055, 1627, 1680, 1783, 2258, 2503, 2517, 2660, 2837, 2839, 3040, 3118, 3194  
*Achlya hypogyna* 1019  
*Alternaria* 1025, 1757  
*Amoebidium* 2043  
*Arthromitus* 2043  
*Aspergillus* 1025, 1757  
*A. fumigatus* 992  
*A. niger* 1019  
*A. terreus* 2968  
*Beauveria* 1687  
*B. bassiana* 1019, 1043  
*B. tenella* 2641  
*Candida albicans* 3108  
*Cephalosporium* 1025, 1757  
*Coelomomyces* 622, 767, 1019, 1038  
*C. dodgei* 394, 611  
*C. dubitskii* 2031  
*C. iliensis* 1065  
*C. lativittatus* 394  
*C. macleayae* 2031  
*C. milkoi* 445, 1065  
*C. omorii* 2031
- Fungus contd.**  
*Coelomomyces* contd.  
*C. opifexi* 107  
*C. ponticulus* 588  
*C. psorophorae* 1237  
*C. punctatus* 394  
*C. quadrangulatus* 2031  
*C. stegomyiae* 588, 2031  
*Coelomycidium* 144  
*C. simulii* 1065  
*Culicinomyces* 1729  
*C. clavosporus* 62, 1829  
*Dermatophilus congolensis* 777  
*Doratomyces* 1757  
*Entomophthora* 454, 1757  
*E. apiculata* 202  
*E. aquatica* 1563  
*E. conglomerata* 1019  
*E. culicis* 1025  
*E. muscae* 3031  
*Fusarium* 1025, 1757  
*F. oxysporum* 1019, 2937  
*Malassezia pachydermatis* 2240  
*Metarhizium anisopliae* 445, 596, 860, 1043, 1065, 2641, 3266, 3336  
*Mucor circinelloides* 1019  
*M. fuscus* 1669  
*M. saturninus* 1019  
*Nocardia farcinica* 502  
*Paecilomyces varioti* 1025, 1757, 3336  
*Penicillium* 1019, 1025, 1757  
*P. cyclopium* 1669  
*Phoma* 1757  
*Pyricularia* 87  
*Rhizopus* 1025  
*R. stolonifer* 2968  
*Saprolegnia* 1757, 1902  
*S. monoea* 1019  
*Smittium* 2043  
*Streptomyces culudicus* 1827  
*Tabanomyces milkoi* 3336  
*Trichoderma* 1025, 1757
- Fur bearers**  
 mite control on, acaricides for 728  
 pest control on, acaricide applicators for 740
- 3-Furancarboxylic acid, 5-(phenylmethyl)-,** in rat, biotransformation metabolite 1452
- furcifer, *Onthophagus***  
*furcifer*, *Aedes*  
*furcifer*, *Culicoides*  
*furmani*, *Ischyropoda*
- Furniture, *Anobium punctatum* in, in** Singapore 1657
- 7H-Furo[3,2-g][1]benzopyran-7-one, 4,9-dimethoxy-**  
 antifedant for  
*Blattella germanica* 2796  
*Musca domestica* 2796  
*Neostylopyga rhombifolia* 2796  
*Periplaneta americana* 2796
- 7H-Furo[3,2-g][1]benzopyran-7-one, 4-methoxy-**  
 against, *Culex pipiens* 2796  
 antifedant for  
*Blattella germanica* 2796  
*Musca domestica* 2796  
*Neostylopyga rhombifolia* 2796  
*Periplaneta americana* 2796
- 7H-Furo[3,2-g][1]benzopyran-7-one, 9-methoxy-**  
 antifedant for  
*Blattella germanica* 2796  
*Musca domestica* 2796  
*Neostylopyga rhombifolia* 2796  
*Periplaneta americana* 2796
- Furunculosis, in man, caused by *Cordylloba***  
*anthropophaga* 2417
- Fusarium*, in, Culicidae, in Ukraine** 1025, 1757
- Fusarium oxysporum***  
 in  
*Aedes detritus*, in Italy 2937  
 Culicidae, in USSR 1019
- fusca, *Glossina***  
*fusca*, *Protaetia*  
*fuscicostatus*, *Tabanus*  
*fuscipennis*, *Sepedon*  
*fuscipes*, *Glossina*  
*fuscocephalus*, *Culex*  
*fuscus*, *Blaberus* (see *B. craniifer*)  
 GABA (see Butanoic acid, 4-amino-)

- Gabon**  
*Chrysops* spp. in 861  
*Culicoides grahamii* in 861  
 filariasis in 861
- gagates, Formica**  
**gagates, Onthophagus**  
**Gahrlepiea, Rickettsia tsutsugamushi** in, in Maharashtra 3090
- Gahrlepiea agrariusia**  
 in China 997  
 seasonal abundance of 997
- Gahrlepiea lamella**  
 sp. nov., description of 294  
 in China 294  
 on *Eothenomys melanogaster*, in Anhui 294
- Gahrlepiea latiscutata**  
 sp. nov., description of 3098  
 in China 3098  
 on *Eothenomys melanogaster*, in Anhui 3098
- Gahrlepiea ligula** (see *Schoengastiella ligula*)
- Gahrlepiea meridionalis**  
 sp. nov., description of 1667  
 in China 1667  
 on *Apodemus agrarius*, in Yunnan 1667  
 on *Rattus rattus*, in Yunnan 1667  
 on *Tupaia glis*, in Yunnan 1667
- Gahrlepiea pyriformis**  
 sp. nov., description of 2769  
 in Zaire 2769  
 on *Micropotamogale ruwenzorii*, in Zaire 2769
- Gahrlepiea saduski**  
 in China 997, 2760  
 on Rodentia, in Kiangsu 2760  
 seasonal abundance of 997
- D-Galactose, Musca autumnalis** feeding responses to 474
- Galactosidase, α-**  
 in *Haematobia irritans* gut 3369  
 in *Sarcophaga albiceps* mid-gut 3014  
 in *Stomoxys calcitrans* 3030
- Galactosidase, β-**  
 in *Haematobia irritans* gut 3369  
 in *Stomoxys calcitrans* 3030
- galapagoensis, Ixodes**  
**Galapagos Islands, Ixodes galapagoensis** in, on *Oryzomys* 1949
- galeratum, Simulium**  
**Gallacanthus cornutus**  
 in Nigeria 1493, 2013  
 on fowl, in Nigeria 1493, 2013  
 on guineafowl, in Nigeria 1493
- gallegoi, Thyreophagus**  
**Galleria mellonella**  
 denso-nucleosis virus in 22  
*Neoplectana* spp. in, culturing of 2693  
 on man, hypersensitivity to 319
- gallicus, Polistes**  
**gallinae, Echinophaga**  
**gallinae, Ceratophyllus**  
**gallinae, Dermanyssus**  
**gallinae, Goniocotes**  
**gallinae, Menopon**  
**Gallus domesticus** (see Fowl)
- Galumna nigra**  
*Anoplocephala* in, in Azerbaijan 1051  
 in USSR 1051  
 in pastures, in Azerbaijan 1051
- Gamasidae**  
 on rodents, in Indonesia 1963  
 on small mammals, in Maritime Territory 491
- Gamasina, in Afghanistan** 695
- Gamasinae**  
 bacteria in, in Kirghizia 1033  
 in rodent nests, in Transbaikalia 1032  
 on bat, in Moldavia 1077  
 on birds, in Kirghizia 1033  
 on Rodentia, in Maritime Territory 3389
- Gamasoidea**  
 on mouse-like rodents, in Crimea 993  
 on small mammals, in Bulgaria 1659  
 on *Sorex*, in USSR 1675  
 on subterranean mammals, in Hungary 2244
- Gambia**  
*Aedes* spp. in, on man 393  
*A. aegypti* in, viruses in 2037, 2038  
*Anopheles* spp. in 2363  
*A. gambiae* in 612  
*A. melas* in 612, 1823
- Gambia contd.**  
*Glossina* spp. in, on cattle 1299  
*G. morsitans* in  
 on cattle 1298, 1305  
 on man 1317  
*G. palpalis* in, on cattle 1298, 1305  
*Mansonia* spp. in 2363  
*M. africana* in, on man 393  
 trypanosomiasis in 1298, 1299, 1305  
 yellow fever in 2037, 2038
- gambiae, Anopheles**  
**gambienis, Glossina palpalis**  
**Gamboa viruses**  
 in  
*Aedeomyia squamipennis*  
 in Argentina 2629  
 in Ecuador 2629  
 in Panama 2629
- Gambusia**  
 aquatic weeds as affecting 2346  
 neem extracts in, toxicity of 3216  
 preying on  
*Anopheles* spp., and biological control using 3194  
 Culicidae, and biological control using, in Georgia (USSR) 2346  
 water pollution as affecting 2346
- Gambusia affinis**  
*Bacillus thuringiensis* in, not pathogenic 3296  
 DDT in, inducing vitellogenin synthesis 3129  
 food preferences in 3213  
 food requirements of 2091  
 holding tanks for 2929  
 in ponds, effects on ecosystem of 1543  
 in rice-fields, effects on ecosystem of 1543  
 inorganic salts in, toxicity of 2794  
 insect growth regulators in, residues of 3013  
 marking of 2090  
 Microsporidia in, in California 2097  
 mosquito-control recirculation ditches as affecting 1782  
 pesticides in, toxicity of 2794  
 pollution as affecting 2094  
 prey of, preferred sizes of 2092  
 prey preferences in 2093  
 preying on  
*Aedes* spp., and biological control using, in California 2121  
*Culex quinquefasciatus* 3213  
*C. tarsalis* 2092  
*Tubifex tubifex* 3213  
 traps for 2096
- Game animals**  
 arthropod parasites of, in South Africa 1888  
 arthropod pests of, in German Democratic Republic 1721  
 parasites of, in Africa, bibliography 13  
 pest control on 1888
- Gamma benzene hexachloride** (see Lindane)
- Gamma-BHC** (see Lindane)
- Gamma-HCH** (see Lindane)
- Gan Gan virus**, in, Culicidae, in New South Wales 2033
- Gangrene**, in Asian buffalo, caused by *Haematopinus tuberculatus* 2250
- Garbage dumps** (see Rubbish dumps)
- Gardona** (see Tetrachlorvinphos)
- garei, Ceratophyllus**  
**Garlic** (*Allium sativum*)  
 insecticidal activity of extracts of 2792  
 Garlic extracts, with pyrethrins, against, *Musca domestica* 1447
- Gasterophilidae**  
 control of 2691  
 in Nigeria 2003  
 on livestock, book 2691
- Gasterophilus**, in Tadzhikistan 154
- Gasterophilus haemorrhoidalis**  
 biology of 442  
 in USSR 442  
 on horse, in Buryatia 442
- Gasterophilus inermis**  
 biology of 442  
 in USSR 442  
 on horse, in Buryatia 442
- Gasterophilus intestinalis**  
 biology of 442  
 in Morocco 2166
- Gasterophilus intestinalis contd.**  
 in USSR 442  
 on horse  
 in Buryatia 442  
 in Morocco 2166  
 seasonal abundance of 2166  
 sound production in, endothermy and 1337
- Gasterophilus nasalis**  
 biology of 442  
 in Morocco 2166  
 in USSR 442  
 on horse  
 in Buryatia 442  
 in Morocco 2166  
 seasonal abundance of 2166
- Gasterophilus nigricornis**  
 biology of 442  
 in USSR 442  
 on horse, in Buryatia 442
- Gasterophilus pecorum**  
 biology of 442  
 in USSR 442  
 on horse, in Buryatia 442
- Gasterosteus aculeatus**, preying on, Culicidae, in New Jersey 3207
- Gastromermis**  
 development in 145  
 in, *Simulium* spp., in Ivory Coast 145  
 sex ratio in 145
- gazellus, Onthophagus**  
**GBH** (see Lindane)
- geigy, Boophilus**  
**gejgelensis, Culicoides**  
**Gel diffusion tests**, for identifying Triatomine blood-meals 1506
- gelidus, Culex**  
**geminata, Solenopsis**  
**gemma, Amblyomma**  
**Genetic control**  
 of arthropods  
*Aedes aegypti* 2365  
*Anopheles albimanus* 3194  
*A. gambiae* 3194  
*Culex tarsalis* 380  
 model 2102  
 Culicidae 1706, 3284  
 review 3140  
*Lucilia cuprina* 167  
*Musca autumnalis* 2447  
*Simulium* spp. 1702  
*Stomoxys calcitrans* 2447  
 vectors 6
- geniculatus, Aedes**  
**Genoneopsylla angustidigita**  
 sp. nov., description of 2864  
 in China 2864  
 on *Alticola stoliczkanus*, in China 2864  
 on *Ochotona*, in China 2864
- Genoneopsylla bisinuata**  
 sp. nov., description of 2864  
 in China 2864  
 on *Rattus coxingi*, in China 2864  
 on *Rattus niviventer*, in China 2864
- Genoneopsylla claviprocera**  
 sp. nov., description of 2864  
 in China 2864  
 on *Apodemus latronum*, in China 2864  
 on *Pitymys irene*, in China 2864
- Genoneopsylla thysanota**  
 in China 2864  
 on *Ochotona*, in China 2864
- genowaysi, Geomydoecus**  
**geometricus, Latrodectus**  
**geomydis, Geomydoecus**  
**Geomydoecus**  
 on *Geomys*, key 33  
 taxonomy of, automated 2854
- Geomydoecus asymmetricus**  
 sp. nov., description of 1492  
 in Mexico 1492  
 on *Thomomys umbrinus*, in Mexico 1492
- Geomydoecus birneyi**  
 sp. nov., description of 1171  
 in Mexico 1171  
 in USA 1171  
 on *Thomomys bottae*, in North America 1171  
 on *Thomomys umbrinus*, in North America 1171
- Geomydoecus californicus**  
 descriptions of 3164



- Geomydoecus californicus** *contd.*  
 complex of  
   on *Thomomys*, in North America 3164  
 taxonomy of 3164
- Geomydoecus dickermani**  
 descriptions of 1171  
 in Mexico 1171  
 on *Thomomys umbrinus*, in Mexico 1171
- Geomydoecus ewingi**, in USA 33
- Geomydoecus genowaysi**  
 descriptions of 1492  
 in Mexico 1492  
 on *Thomomys umbrinus*, in Mexico 1492
- Geomydoecus geomydis**  
 hosts of 33  
 in USA 33
- Geomydoecus geomydis subgeomydis**,  
 taxonomy of, raised to specific rank 33
- Geomydoecus greeri**  
 sp. nov., description of 1492  
 in Mexico 1492  
 on *Thomomys umbrinus*, in Mexico 1492
- Geomydoecus guadalupensis**  
 sp. nov., description of 2849  
 in Mexico 2849  
 in USA 2849  
 on *Thomomys bottae*, in North America 2849
- Geomydoecus heaneyi**  
 sp. nov., description of 33  
 in USA 33  
 on *Geomys bursarius*, in Texas 33
- Geomydoecus hueyi**  
 sp. nov., description of 31  
 in USA 31  
 on *Thomomys bottae*, in California 31
- Geomydoecus idahoensis**  
 descriptions of 31  
 in USA 31  
 on *Thomomys townsendii*, in USA 31  
 taxonomy of, raised from subspecies of *G. oregonus* 31
- Geomydoecus illinoisensis**, in USA 33
- Geomydoecus jamesbeeri**  
 descriptions of 1492  
 in Mexico 1492  
 on *Thomomys umbrinus*, in Mexico 1492
- Geomydoecus johnhagneri**  
 sp. nov., description of 1171  
 in Mexico 1171  
 on *Thomomys umbrinus*, in Mexico 1171
- Geomydoecus markhagneri**  
 sp. nov., description of 1171  
 in Mexico 1171  
 on *Thomomys umbrinus*, in Mexico 1171
- Geomydoecus minor**  
 descriptions of 1171  
 in Mexico 1171  
 in USA 1171  
 on *Thomomys bottae*, in North America 1171  
 on *Thomomys umbrinus*, in North America 1171  
 complex of, on *Thomomys*, in North America 1171
- Geomydoecus nebrathkensis**  
 sp. nov., description of 33  
 in USA 33  
 on *Geomys bursarius*, in Nebraska 33
- Geomydoecus neocopei**  
 descriptions of 1492  
 in Mexico 1492  
 on *Thomomys umbrinus*, in Mexico 1492  
 complex of, on *Thomomys umbrinus*, in Mexico 1492
- Geomydoecus oklahomensis**  
 in USA 33  
 on *Mustela frenata* 33
- Geomydoecus oregonus**  
 descriptions of 31  
 in USA 31  
 on *Thomomys bulbivorus*, in Oregon 31  
 complex of, key 31
- Geomydoecus oregonus idahoensis**,  
 taxonomy of, raised to specific rank 31
- Geomydoecus orizabae**  
 sp. nov., description of 1171  
 in Mexico 1171  
 on *Thomomys umbrinus*, in Mexico 1171
- Geomydoecus peregrini**  
 sp. nov., description of 1492  
 in Mexico 1492  
 on *Thomomys umbrinus*, in Mexico 1492
- Geomydoecus potteri**  
 sp. nov., description of 1492  
 in Mexico 1492  
 on *Thomomys umbrinus*, in Mexico 1492
- Geomydoecus shastensis**  
 sp. nov., description of 31  
 in USA 31  
 on *Thomomys bottae* in California 31  
   in Oregon 31
- Geomydoecus spickai**  
 sp. nov., description of 33  
 in USA 33  
 on *Geomys bursarius*, in Missouri 33
- Geomydoecus subcalifornicus**  
 descriptions of 2849  
 hosts of 2849  
 complex of 2849
- Geomydoecus subgeomydis**  
 in USA 33  
 taxonomy of, raised from subspecies of *G. geomydis* 33
- Geomydoecus timmi**  
 sp. nov., description of 1171  
 in Mexico 1171  
 in USA 1171  
 on *Thomomys bottae*, in North America 1171
- Geomydoecus williamsi**  
 sp. nov., description of 1171  
 in Mexico 1171  
 on *Thomomys umbrinus*, in Mexico 1171
- Geomydoecus zacatecae**  
 sp. nov., description of 1171  
 in Mexico 1171  
 in USA 1171  
 on *Thomomys bottae*, in North America 1171  
 on *Thomomys umbrinus*, in North America 1171
- Geomylichus**, on *Perognathus parvus*, in Oregon 2249
- Geomylichus perognathi**  
 sp. nov., description of 3096  
 in USA 3096  
 on *Perognathus fasciatus*, in Oregon 3096  
 on *Perognathus parvus*, in Oregon 3096
- Geomylichus texanus**  
 in USA 2249  
 on *Dipodomys ordii*, in Oregon 2249
- Geomys**, *Geomydoecus* spp. on, key 33
- Geomys bursarius**, complex of,  
*Geomydoecus* spp. on, in USA 33
- Georgia**  
*Aedes sollicitans* in, in salt marshes 3279  
*A. taeniorhynchus* in, in salt marshes 3279  
 cattle dung in, control of 1932  
*Haematobia irritans* in  
   in cattle dung 2699  
   on cattle 1367  
 human babesiosis in 3397  
 mosquito control in 383  
*Solenopsis invicta* in 3384  
*Stomoxys calcitrans* in 904  
*Vespa* spp. in, on pig 914
- Geotrupes spiniger**  
 dung utilisation by 2208  
 in France 2208
- Geotrupidae**, in Saudi Arabia 2529
- Geranial** (see 2,6-Octadienal, 3,7-dimethyl-, (E)-)
- Geraniol** (see 2,6-Octadien-1-ol, 3,7-dimethyl-)
- Gerbil**, great (see *Rhombomys opimus*)
- Gerbil**, red-tailed (see *Meriones erythraurus*)
- gerbilli**, *Xenopsylla*
- Germacrene D** (see 1,6-Cyclodecadiene, 1-methyl-5-methylene-8-(1-methylethyl)-, [S-(1E,6E)]-)
- German Democratic Republic**  
*Blatta orientalis* in 335  
*Blattella germanica* in 335  
 game animals in, arthropod pests of 1721  
*Haematopinus suis* in, on pig 802  
*Musca domestica* in, in pig housing 3350, 3351  
*Neotrombicula autumnalis* in 1976  
 Oestroidea in, on livestock 2691  
*Periplaneta americana* in 335
- German Federal Republic**  
*Aedes cantans* in 1250  
*A. rusticus* in 1250  
 arthropods in, common names of 545  
 birds' nests in, overwintering arthropods in 2005  
 Culicidae in 1235  
*Culiseta morsitans* in 1250  
 Diptera in, on cattle 465  
*Haemaphysalis punctata* in, on birds 956  
*Haematopinus suis* in, on pig 346, 1959  
 human parasitic diseases in 534  
*Ixodes* spp. in, on birds 956  
*I. ricinus* in  
   natural enemies of 3391  
   viruses in 233  
 mites in, in house dust 3094  
*Musca domestica* in, in cattle housing 1356  
 Nematocera in, natural enemies of 468  
*Rhipicephalus sanguineus* in 965  
*Sarcoptes scabiei* in, on pig 1959  
 Scarabacidae in, in dung 3055  
*Simulium* spp. in, natural enemies of 1268  
 Tabanidae in 1358  
*Tabanus cordiger* in 469
- germana**, *Vespa crabro*
- germanica**, *Blattella*
- germanica**, *Pseudovespula* (see *Vespa germanica*)
- germanica**, *Vespula* (*Pseudovespula*)
- Gerridae**, in ponds, effects of aquatic plants on 1243
- Gerris lacustris**  
 in Czechoslovakia 2942  
 in aquatic habitats, effects of pirimiphos-methyl on 2942
- gerstaeckeri**, *Triatoma*
- Gesektin K** (see Chlorpyrifos)
- gestroi**, *Psilus*
- Getah virus**  
 in  
   *Aedes aegypti*, replication of 89  
   *A. albopictus*, replication of 89  
   *A. pseudoscutellaris*, replication of 89  
   *Culex tritaeniorhynchus*, in Honshu 3286  
   man, in West Malaysia 1246  
   isolation of, in mosquito cell lines 2950
- Geusibia stenosiuncta**  
 sp. nov., description of 568  
 in China 568  
 on small mammals, in Yunnan 568
- Ghana**  
*Cordylobia anthropophaga* in, on man 1375  
 Culicidae in 97  
*Haemolaelaps* spp. in 3422  
*Simulium* spp. in 1704, 2152
- ghanensis**, *Demodex*
- Gigantodax**  
 maxillary sensilla in 3309  
 pathogens of, in Guatemala 144
- gigas**, *Goniodes*
- glaber**, *Macrocheles*
- glacialis**, *Euhoplosyllus* (*Hoplosyllus*)
- glacialis**, *Hoplosyllus* (see *Euhoplosyllus glacialis*)
- gladiator**, *Tabanus*
- glasgowi**, *Haemolaelaps* (see *Androlaelaps fahrenheiti*)
- Glassfibre**, *Dermestes maculatus* in, damage caused by 3057
- glauca**, *Notonecta*
- Glaucomyx volans**  
*Orchopeas caedens* on, in Massachusetts 3182  
*Rickettsia prowazekii* in, in Massachusetts 3182
- Siphonaptera in nests of, in USA 2339

***Glaucomyx volans* contd.**

Siphonaptera on, avoidance of competition by 1514

***Glaucops hirsutus***

descriptions of 217  
in France 217, 659  
parasitised by, Pteromalidae, in France 659

***globator, Arrenurus******globosensilla, Walchia******Globulins, blood serum***

$\alpha$ -, in camel, effects of *Haematopinus tuberculatus* on 1175

$\beta$ -, in camel, effects of *Haematopinus tuberculatus* on 1175

$\gamma$ -, in camel, effects of *Haematopinus tuberculatus* on 1175

in *Bos taurus*  $\times$  *B. indicus*, effects of *Chrysomya bezziana* on 663

in *Glossina morsitans* diet, uptake from mid-gut of 1092

***Globulins, immune*****A**

in man, depressed during scabies 1421  
to *Dermatophagoides pteronyssinus*, in man 520, 739

to *Sarcoptes scabiei*, in man 2776

**E**

to *Apis mellifera* venom

in man 2459

measuring of 1933

to *Cladotanytarsus lewisi*, in man

1596

to *Dermatophagoides*, in man 2489

to *Dermatophagoides farinae*, in mouse

1418

to *Dermatophagoides pteronyssinus*, in

man 520, 724, 739, 1419, 1654,

1955, 2492

to house dust, in man 1955

to house-dust mites, in man 3420

to insect venoms, in man 1630

to *Otodectes cynotis*, in cat 296

to *Sarcoptes scabiei*, in man 1421,

2776

**G**

to *Apis mellifera* venom, in man 2459

to *Dermatophagoides pteronyssinus*, in

man 520, 739

to *Sarcoptes scabiei*, in man 1421

**M**

to *Dermatophagoides pteronyssinus*, in

man 520

to *Sarcoptes scabiei*, in man 1421

***Glossina***

behaviour in, studying of 148

biology of 871, 1695, 1725, 3003

blood-meals in, identifying of 3322

chromosomes in 148, 1995

control of 1083, 1302, 1304, 1308, 1309,

1311, 1333, 1694, 1695, 1886, 3003

biological 437, 1325

bush clearance for 1331

environmental impact of, review 1334

growth regulators for 148

insecticides for 1329, 1697, 1876,

2989, 2993

non-target effects of 876, 1876, 2163,

2404, 3323

sterile-insect release for 1100

dispersal of, by wind 1096, 1869

distribution maps of 1318

distribution of 3327, 3328

host location in 1863

host selection in 1864

in Niger 1302

in Nigeria 1309, 1322, 1329

in Upper Volta 1304

in Zambia 1333

irrigation as affecting 1874

male inseminating potential in 1101

mating competitiveness in, effects of  $\gamma$ -

irradiation on 1100

multiple mating in 1101

on cattle, in Gambia 1299

palaeoecology of 3006

parasites of, catalogue 437

pathogens in, modes of transmission of

1091

pathogens of, bibliography 2517

phagostimulants for 1471

population genetics of 1865

rearing of 3003

***Glossina* contd.****rearing of contd.**

techniques for 148, 2406

research on, at ICIPE 15

rural development as affecting 1874

salivation in 1321

sex pheromones of 148

sleeping sickness in absence of 644

sterilisation of,  $\gamma$ -irradiation for 1100

traps for 1095

*Trypanosoma* spp. in

development of 1084

infectivity of 1865

interaction of 1866

transmission of 1587, 1867, 1868, 1879

***Glossina austeni***

feeding behaviour in, effects of bat-wing

membrane on 1099

hemocytes in 650

in Mozambique 1307

larval development in 1319

rearing of, techniques for 871

sex pheromone of 649

***Glossina austeni mossurizensis* (see *G. austeni*)*****Glossina brevipalpis***

in Mozambique 1307

in Uganda 1877

in Zambia 1308

*Trypanosoma* spp. in, infectivity of 1877

***Glossina caliginea***

colour patterns in 2688

in Cameroon 2688

***Glossina fusca*, in Ivory Coast 2989*****Glossina fuscipes***

control of, international cooperation in

1332

in Kenya 1332

in Zambia 1308

***Glossina fuscipes fuscipes***

in Chad 1303

in Congo 1310

in Ivory Coast 150

in Uganda 1877

*Trypanosoma* spp. in

infectivity of 1877

transmission of 1303

*T. brucei* in, transmission of 1310

wing fray in, relation of ovarian age and

150

***Glossina fuscipes quanzensis***

in Congo 1310

*Trypanosoma brucei* in, transmission of

1310

***Glossina longipalpis***

in Ivory Coast 2989

in Senegal 1301

***Glossina morsitans***

amino acids in, absorption by mid-gut of

2159

bioclimatic limits of, predicting of 1097

cell cultures from 1470

control of 1306

insecticides for 1327

non-target effects of 872, 1327, 3005

repellents for 1087

crop in, unloading of 2160

*Dermatophilus congolensis* in,

transmission of 777

enzymes in 2995

excretion in 2160

fat-body in, separating of uterine glands

and 3319

feeding behaviour in, effects of bat-wing

membrane on 1099

flight activity in, effects of temperature on

1885

in Botswana 872

in Ethiopia 1306

in Gambia 1305

in Ivory Coast 150

in Niger 1327

larval development in 1319

larval nutrition in 1094

marking of, fluorescent pigments for

1860

mid-gut in 2159

water absorption by 2160

on cattle, in Gambia 1305

radiobiology of 1320

rearing of

diets for 148

techniques for 1093, 1099, 1320

***Glossina morsitans* contd.****salivary glands of**

culture-medium component for,

*Trypanosoma brucei* 149

use in culture of trypanosomes of 875

sex pheromone of, release sites of 874

*Trypanosoma congolense* in 2162

transmission of 1870

wing fray in, relation of ovarian age and

150

group of, sex pheromones of 649

***Glossina morsitans centralis***

in Zambia 1308, 2161

sampling of 2161

traps for 2161

***Glossina morsitans morsitans***

abstinons in

mating inhibition by 3324

receptors for 3325

alighting response in, effects of model size

and odour on 152

arrestants for 762

attractants for 1881

attraction of, to host odour, effects of host

diet on 2997

behaviour in, effects of rearing methods

on 151

control of

antibodies for 646

insecticides for 1089, 2680

non-target effects of 436

sterile-insect release for 1089, 1098

cross-breeding of normal and marker

strains of 1103

dispersal of 647

endosulfan in, effects on lipids of 2680

flight activity in 647

in Gambia 1317

in Mozambique 1307, 1861, 1862

in Tanzania 762, 2679

in Zambia 1308

in Zimbabwe 152, 436, 647, 1881, 1882,

2997

in deciduous woodland, in Zimbabwe

1882

in riverine woodland, in Zimbabwe 1882

inbreeding of, effects of 1880

larviposition in, selection of sites for

2403

lipids in, transport of 2682

marker strains of 1103

marking of, indicator activation method

for 2681

mating in 648

mid-gut in, uptake of proteins from 1092

monitoring of 1861

neurosecretory system in 2998

on cattle, in Zimbabwe 2997

on man, in Gambia 1317

ovulation in, dependence on mating of

2998

rearing of, techniques for 871

repellents for 1881

resting behaviour in 1862

seasonal abundance of 1882

sex pheromone of 648, 649

laboratory synthesis of 2683

receptors for 3325

responses of males to 2679

sound production in 2999

spermatophore in 3001

sterilisation of, chemosterilants for 762

traps for 647, 1317, 1881

efficiency of 1883

*Trypanosoma brucei* in

antigenic changes in 1335

sexual forms of 3326

*T. congolense* in

development of 153

transmission of 2164

*T. vivax* in, transmission of 1878, 2164

***Glossina morsitans morsitans*  $\times$  *G. m.***

*centralis*, male sterility in 2405

***Glossina morsitans submorsitans***

control of, insecticides for 1329, 133



- Glossina morsitans submorsitans** *contd.*  
*Trypanosoma* spp. in, transmission of 1303
- Glossina nigrofusca**, in Ivory Coast 2989
- Glossina nigrofusca nigrofusca**  
 control of, insecticides for 2992  
*Hexameris glossinae* in, in Ivory Coast 3320  
 in Ivory Coast 2992, 3320
- Glossina pallicera**, in Ivory Coast 2989
- Glossina pallicera pallicera**  
 control of, insecticides for 2992  
*Hexameris glossinae* in, in Ivory Coast 3320  
 in Ivory Coast 2992, 3320
- Glossina pallidipes**  
 alighting response in, effects of model size and odour on 152  
 attractants for 1881  
 attraction of, to host odour, effects of host diet on 2997  
 control of  
   insecticides for 1089  
   international cooperation in 1332  
   non-target effects of 436  
 dispersal of 647  
 feeding behaviour in 1313  
   effects of bat-wing membrane on 1099  
   flight activity in 647  
 habitats of 3321  
 in Ivory Coast 150  
 in Kenya 651, 1085, 1312, 1313, 1332, 2685, 3000, 3002, 3321  
 in Mozambique 1307  
 in Tanzania 2679  
 in Uganda 1877  
 in Zambia 1308  
 in Zimbabwe 152, 436, 647, 1881, 1882, 2997  
 in conifer plantations, in Kenya 3321  
 in deciduous woodland, in Zimbabwe 1882  
 in riverine woodland, in Zimbabwe 1882  
 life tables for 3000  
 on cattle, in Zimbabwe 2997  
 rearing of  
   strains for 3000  
   techniques for 1102, 1316, 2984  
 repellents for 1881  
 salivary glands in, enlarged 651  
 seasonal abundance of 1882  
 traps for 647, 1881, 2685, 3002  
   efficiency of 1883  
*Trypanosoma* spp. in detecting of 1312  
 infectivity of 1877  
*T. brucei* in, in Kenya 651, 1312  
*T. congolense* in  
   effects on mid-gut of 1114  
   in Kenya 1085, 1312  
*T. vivax* in, in Kenya 1085  
 wing fray in, relation of ovarian age and 150
- Glossina palpalis**  
 control of, insecticides for 1697, 1698  
*Hexameris glossinae* in, in Ivory Coast 3320  
 in Congo 1310, 2994  
 in Gambia 1305  
 in Ivory Coast 150, 1697, 2989, 2992, 3320  
 in Upper Volta 1698  
 on cattle, in Gambia 1305  
 on man  
   in Congo 2994  
   in West Africa 1873  
 on pig, in West Africa 1873  
 population growth in, model 1106  
 rearing of, techniques for 1314  
*Trypanosoma* spp. in, transmission of 2994  
*T. brucei* in, transmission of 1310, 1873  
 wing fray in, relation of ovarian age and 150  
 group of  
   control of, insecticides for 1696, 2990, 2991  
   in Ivory Coast 2983  
   in Upper Volta 1696  
   population age composition in 1696  
   sex pheromones of 649  
   traps for 2983
- Glossina palpalis gambiensis**  
 control of  
   insecticides for 435, 1326, 1699, 1875, 1884, 2986, 2987  
   sterile-insect release for 873, 1088, 1323, 1324, 1699, 1875, 1884, 3004  
   traps for 435, 2986, 2987  
 dispersal of, effects of  $\gamma$ -irradiation on 873  
 drought as affecting 1300, 1301  
 hemocytes in 650  
 in Gambia 1298  
 in Ivory Coast 150, 2986, 2987  
 in Mali 2996  
 in Senegal 1300, 1301  
 in Upper Volta 435, 873, 1088, 1323, 1324, 1326, 1699, 1875, 1884, 2986, 2987, 3004  
 life-span in, effects of  $\gamma$ -irradiation on 873  
 on cattle, in Gambia 1298  
 rearing of  
   hosts for 2686, 2687  
   techniques for 1088, 1315  
 reproductive system in, abnormalities in 2684  
 resting places of 1326, 1698  
 sterilisation of,  $\gamma$ -irradiation for 1323  
 wing fray in, relation of ovarian age and 150
- Glossina palpalis palpalis**  
 biology of 1872  
 control of  
   insecticides for 1700, 2157  
   non-target effects of 2157  
 excretion in, effects of diet on 438  
 fecundity in, effects of diet on 439  
 in Cameroon 1700  
 in Ivory Coast 1872  
 in Nigeria 2157  
 marking of, indicator activation method for 2681  
 meal size in, effects of diet on 438  
 nutrition of 2402  
 on pig, in Cameroon 1700  
 ovarian development in, effects of diet on 2402  
 progeny weight in, effects of diet on 439  
 radiobiology of 1320  
 rearing of  
   diets for 1104, 1105  
   techniques for 645, 1320, 2985  
 reproduction in, effects of diet on 2158  
 resting places of 1700  
*Trypanosoma brucei* in, transmission of 1872
- Glossina swynnertoni**  
 control of, insecticides for 1328  
 in Tanzania 1328
- Glossina tachinoides**  
 control of 1306  
   insecticides for 435, 1327, 1875, 2157, 2401, 2982, 2986, 2987, 2988  
   non-target effects of 1327, 2157, 2982  
   traps for 435, 2986, 2987, 2988  
 in Chad 1303  
 in Ethiopia 1306  
 in Ivory Coast 150, 2986, 2987, 2988  
 in Mali 2996  
 in Niger 1327, 1861, 1862  
 in Nigeria 2157  
 in Upper Volta 435, 1088, 1323, 1875, 1884, 2401, 2982, 2983, 2986, 2987, 2988, 3004  
 on man, in West Africa 1873  
 on pig, in West Africa 1873  
 resting behaviour in 1862  
 resting places of 1698  
 traps for 1861, 2983  
*Trypanosoma* spp. in, transmission of 1303  
*T. brucei* in, transmission of 1873  
 wing fray in, relation of ovarian age and 150
- Glossinidae**, in Nigeria 2003
- D-Gluconic acid**, calcium salt (2:1), in man, for treating bite by *Latrodectus mactans* 3113
- $\alpha$ -D-Glucopyranoside,  $\beta$ -D-fructofuranosyl** (saccharose; sucrose)  
 diet component for  
   *Aedes sierrensis* 2100  
   *Chironomus riparius* 3353
- $\alpha$ -D-Glucopyranoside,  $\beta$ -D-fructofuranosyl** *contd.*  
 diet component for *contd.*  
*Culiseta longiareolata* 2364  
 in *Anopheles stephensi* diet, effects on adult weight increase and glyceride accumulation of 3257  
 in *Culex tritaeniorhynchus* diet, effects on adult weight increase and glyceride accumulation of 3257  
 in insecticidal baits, enhancing toxicity 528  
 in *Lucilia sericata*, receptors for, effects of antitubulin drugs on 461  
 in *Phormia regina*, effects of ziziphin on receptors for 1613  
 in *Phormia terraenovae*, receptors for 910  
 in *Psorophora ferox* 1208  
 in Tabanid diet, effects on life-span of 1921  
*Musca autumnalis* feeding responses to 474  
*Phormia regina* feeding responses to 1619  
*P. terraenovae* responses to 678
- $\alpha$ -D-Glucopyranoside,  $\alpha$ -D-glucopyranosyl** (trehalose)  
 in *Culex pipiens* hemolymph, effects of *Romanomermis culicivora* on 1229  
 in insects, review 330  
 in *Periplaneta americana*, regulation of utilisation of 1734
- Glucose phosphate isomerase** (see Isomerase, glucose phosphate)
- D-Glucose**  
 in *Anopheles atroparvus*, utilisation by *Brugia patei* of 68  
 in camel blood, effects of *Haematopinus tuberculatus* on 1175  
 in *Culex pipiens* hemolymph, effects of *Romanomermis culicivora* on 1229  
 in *Dermacentor andersoni*, developmental changes in 1400  
 in insecticidal baits, enhancing toxicity 528  
 in *Musca domestica*, permeability of Malpighian tubules to 3029  
 in *Phormia terraenovae*, receptors for 910  
 in *Stomoxys calcitrans*, incorporation into glycerides of, influence of blood-meals on 3028  
*Musca autumnalis* feeding responses to 474
- D-Glucose, 4-O- $\alpha$ -D-glucopyranosyl-**, *Musca autumnalis* feeding responses to 474
- L-Glucose**, in *Musca domestica*, permeability of Malpighian tubules to 3029
- Glucosidase,  $\alpha$ -**  
 in *Haematobia irritans* gut 3369  
 in *Sarcophaga albiceps* mid-gut 3014  
 in *Stomoxys calcitrans* 3030
- Glucosidase,  $\beta$ -**  
 in *Haematobia irritans* gut 3369  
 in *Haematobia irritans* salivary glands 3369  
 in rice-field soils, relation of Chironomidae and 1624  
 in *Stomoxys calcitrans* 3030
- Glucuronidase,  $\beta$ -**, in *Stomoxys calcitrans* 3030
- L-Glutamic acid**  
 in *Aldrichina grahami*, synthesis of proline from 684  
 in *Cochliomyia macellaria*, decreasing during anaerobic metabolism 1359  
 in insects, receptors in muscles for 1998
- L-Glutamine**  
 in *Cochliomyia macellaria*, decreasing during anaerobic metabolism 1359  
 in *Psoroptes cuniculi* 2486  
 in *Psoroptes ovis* 2486
- Glutaraldehyde** (see Pentanedial)
- Glutaric acid,  $\alpha$ -keto-** (see Pentanedioic acid, 2-oxo-)
- Glycerides**  
 in *Anopheles stephensi*, accumulation in adults of 3257  
 in *Boophilus decoloratus* eggs 2210  
 in *Culex tritaeniorhynchus*, accumulation in adults of 3257  
 in *Glossina morsitans*, transport of 2682

- Glycerides contd.**  
in *Glossina morsitans* fat-body, synthesis during pregnancy of 1094  
in *Solenopsis invicta* post-pharyngeal glands 2203  
in *Stomoxys calcitrans* fat-body, incorporation of glucose into, influence of blood-meals on 3028
- $\beta$ -Glycerophosphatase** (see Phosphatase, glycerol 2-)
- Glycine**  
in *Anopheles stephensi*, effects of *Plasmodium berghei* on 1199  
in *Periplaneta americana*, uptake from gut of 553  
in *Periplaneta americana* diet, effects on neurosecretory system of 798  
in *Psoroptes cuniculi* 2486  
in *Psoroptes ovis* 2486
- Glycogen**  
in *Boophilus microplus* perineurium 3407  
in *Cimex hemipterus* mycetocytes 2301  
in *Heterometrus fulvipes* pedipalp muscles, asymmetrical metabolism of 2783  
in *Musca domestica* eggs, effects of  $\gamma$ -irradiation on 478  
in *Musca domestica* flight muscles, age-related changes in 1351  
in *Musca domestica* follicles, induction of synthesis of 475  
in *Periplaneta americana*, effects of thermal acclimation on 1490  
in *Periplaneta americana* hind-gut, regulation of 336  
in *Periplaneta americana* nervous system 2008  
in *Sarcophaga ruficornis* ovarioles, effects of thiourea on synthesis of 1355
- Glycoproteins**  
in *Anopheles stephensi* salivary glands 74  
in *Blattella germanica* tergal-gland secretion 784  
in *Cladotanytarsus lewisi*, allergenicity of 2192  
in *Haematopota pluvialis* salivary glands, sex differences in 187
- Glycosidase**, in *Stomoxys calcitrans* larvae, activity pattern of 2418
- Glycyphagus destructor** (see *Lepidoglyphus destructor*)
- Glycyphagus domesticus**, water relations in 1969
- Glycyphagus microti**  
sp. nov., description of 1970  
development in 1970  
in USA 1970  
on *Microtus pinetorum*, in New York State 1970
- Glyptotendipes paripes**  
control of, growth regulators for 1366, 2412  
emergence in 1905  
in USA 1905
- Gnathatermes tubiformans**  
food location by 2729  
in USA 2729  
in cattle dung, in New Mexico 2729
- Gnathoncus nanus**  
in USA 226  
in poultry dung, in North Carolina 226
- Gnus choldokovskii** (see *Simulium choldokovskii*)
- Gnus decimatus** (see *Simulium decimatum*)
- Gnus malyshevi** (see *Simulium malyshevi*)
- Gnus rostratus** (see *Simulium rostratum*)
- Goat** (*Capra hircus*)  
*Amblyomma variegatum* on, in Malagasy Republic 3060  
arthropod pests of, in Queensland 16  
*Babesia* spp. in, in Egypt 2756  
*Choriotopes bovis* on, in Indonesia 2806  
*Cochliomyia hominivorax* on, in Netherlands Antilles 457  
*Cowdria ruminantium* in, in Guadeloupe 958  
*Ctenocephalides canis* on, effects on blood of 47  
*Demodex caprae* on, distribution pattern of 988  
ectoparasites of, in Philippines 2813
- Goat contd.**  
*Haemaphysalis kopetdaghica* on, in Iran 241  
*H. punctata* on, in Italy 3062  
*H. qinghaiensis* on, in Qinghai 265  
*H. sulcata* on, in Italy 3064  
*H. xinjiangensis* on, in China 972  
*Hippobosca variegata* on, in Saudi Arabia 2533  
*Hyalomma asiaticum* on, in Iran 2211  
Ixodidae on, in Egypt 2752  
Ixodoidea on, in Iran 2750  
*Linguatula serrata* on, in Spain 3117  
*Linognathus stenopsis* on, in Mauritius 344  
Oestroidea on, book 2691  
Peaton virus in, antibodies to 1253  
Phthiraptera on, in Afrotropical region, book 1177  
*Psoroptes* spp. on, in Fiji 1658  
*P. cuniculi* on, in New South Wales 3105  
*Railletia manfredi* on, in New South Wales 3102, 3105  
*Rhipicephalus guilhoni* on, in Egypt 2756  
*R. turanicus* on, in Egypt 2756  
*Sarcoptes scabiei* on, in Indonesia 2806  
*Simulium nigrum* on, in USSR 2973  
*Stephanofilaria assamensis* in, in Uzbekistan 1891  
*Theileria* spp. in, in Egypt 2756  
*Trypanosoma* spp. in, tolerance of 3327, 3328  
*T. congolense* in, local skin reaction to 2164  
*T. evansi* in 184  
*T. vivax* in  
in lymph 1878  
local skin reaction to 2164
- Goat dung**, *Protaetia fusca* in, in Bonin Islands 3382
- Goeldichironomus holoprasinus**  
control of, growth regulators for 1366, 2412  
emergence in 1905  
in USA 1366, 1905, 2412, 3342  
*Microsporidium goeldichironomi* in, in Florida 3342
- Golden hamster** (see Hamster, golden)
- golovi, Tabanus**
- Gongylonema pulchrum**  
in  
*Aphodius obscurus*, in Bulgaria 689  
*A. satyrus*, in Bulgaria 689  
*Onthophagus lemur*, in Bulgaria 689  
vectors of 316
- Goniocotes gallinae**  
control of, insecticides for 32, 2564  
in India 32  
in Nigeria 1493, 2013  
in Poland 2564  
on fowl  
in Nigeria 1493, 2013  
in Poland 2564  
on guineafowl, in Nigeria 1493  
on poultry, in Haryana 32  
survival of, away from host 2851
- Goniodes gigas**  
in Nigeria 2013  
on fowl, in Nigeria 2013
- Gonioididae**, on Columbiformes 1495
- gossypiella, Pectinophora**
- grabhamii, Anopheles**
- gracilis, Bembix**
- gracilis, Centruroides**
- gracilis, Ceratometes**
- grahami, Aldrichina**
- grahamii, Culicoides**
- Grain (stored)**  
*Acarus siro* in, effects on cattle of 1662  
in cattle diet, effects on *Musca autumnalis* in dung of 2441  
insecticides in, bioassay of 1455
- granarius, Sitophilus**
- granulatus, Onthophagus**
- Grapefruit (Citrus paradisi)**
- Grapefruit (stored fruit)**, naled in, uptake from air of 2266
- Grapevine (Vitis vinifera)**
- Grapevine (stored fruit)**, naled in, uptake from air of 2266
- Grass, barnyard** (see *Echinochloa crus-galli*)
- Grass, lemon** (see *Cymbopogon citratus*)
- Grass, molasses** (see *Melinis minutiflora*)
- Grasses**, human hypersensitivity to 989
- Grassland**, Sepsidae in, in England 2456
- Greece**  
leishmaniasis in 1576  
*Phlebotomus papatasi* in 1576  
*P. sergenti* in 1576
- Green fodders, Stomoxys calcitrans** in, in Florida 3352
- Greenland**, mites in, in house dust 3094
- greeri, Geomydoecus**
- gregaria, Schistocerca**
- Gregarinida**  
book 2259  
in, *Leucophaea maderae*, not contributing to gut proteinase 1489
- gregoryi, Pandinus**
- gregsoni, Megabothris calcarifer**
- Grenieria** (see *Cnephia*)
- grisea, Cuterebra**
- griseicollae, Simulium**
- griseocens, Culicoides**
- griseocens, Psychoda**
- grodhausi, Tanytus**
- Gromphadorhina brunneri** (see *Elliptorhina brunneri*)
- Gromphadorhina portentosa**, running in, energetics of 2556
- Ground squirrel, Haemaphysalis japonica** on, in Maritime Territory 2734
- Ground squirrel, golden-mantled** (see *Spermophilus lateralis*)
- Ground squirrel, thirteen-lined** (see *Spermophilus tridecemlineatus*)
- Groundnut (Arachis hypogaea)**
- Groundnut litter, Stomoxys calcitrans** in, in USA 904
- Growth rate**  
in cattle  
effects of blood-sucking flies on 1521  
effects of Diptera on 223  
effects of *Haematobia irritans* on 470, 2422  
effects of *Hypoderma* on 3329  
effects of Simuliidae on 1289  
in fowl, effects of arthropods on 1493  
in guineafowl  
effects of *Amyrsidea powelli* on 2569  
effects of arthropods on 1493
- Grylloidea**, in Bermuda, book 792
- Gryllus domesticus** (see *Acheta domesticus*)
- guacangshanensis, Haematopota**
- guadalupensis, Geomydoecus**
- Guadeloupe** (indexed under French West Indies)
- guangdongense, Leptotrombidium** (*Trombiculindus*)
- guangdongensis, Trombiculindus** (see *Leptotrombidium guangdongense*)
- Guanosine monophosphate reductase** (see Reductase, guanylate)
- guasayana, Triatoma**
- Guatemala**  
*Anopheles albimanus* in 2127  
*Chrysomya albiceps* in 2420  
malaria in 2127  
Simuliidae in, natural enemies of 144  
*Simulium* spp. in 1585  
*S. horacioi* in, on man 1582
- guevarai, Sciuropsis**
- guianense, Simulium**
- guilhoni, Rhipicephalus**
- Guinea corn** (see *Sorghum*)
- Guinea-pig (Cavia cobaya)**  
*Amblyomma americanum* on, feeding sites of 252, 710  
*Boophilus microplus* on, antienzymes to 2217  
*Cheyletiella parasitivorax* on, alopecia caused by 2774  
Connecticut virus in, antibodies to 1408  
*Dermacentor andersoni* on, immunization against 3067  
diazinon in, toxicity of 1718  
*Glossina palpalis* on 2686  
*Leirus quinquestratus* venom in, effects on heart of 309  
rearing of 2686  
tick control on, immunization for 3390  
*Trixacarus caviae* on  
alopecia caused by 1978  
effects of 1979, 1980



- Guinea-pig** *contd.*  
*Trixacarus caviae* on *contd.*  
 hyperkeratosis caused by 1978  
 in USA 1979  
 skin lesions caused by 510  
 4-74 in, toxicity of 1718
- Guinea-pig blood**, diet component for,  
*Glossina palpalis* 1104
- Guineafowl** (*Numida meleagris*)  
*Amyrsidea powelli* on, in Nigeria 2569  
 arthropod parasites of, in Nigeria 1493  
*Cuculotogaster occidentalis* on, in Nigeria 2569
- Guntheria**  
 in Papua New Guinea 1968  
 taxonomy of 1968
- Guntheria buelowi**  
 sp. nov., description of 3426  
 in Papua New Guinea 3426  
 on *Melomys levipes*, in Papua New Guinea 3426  
 on *Rattus niobe*, in Papua New Guinea 3426
- Guntheria pectinata**  
 sp. nov., description of 3426  
 in Papua New Guinea 3426  
 on *Rattus ruber*, in Papua New Guinea 3426
- Guntheria sabinae**  
 sp. nov., description of 3426  
 in Papua New Guinea 3426  
 on *Rattus niobe*, in Papua New Guinea 3426
- Guntheria serrata**  
 sp. nov., description of 1005  
 in Papua New Guinea 1005  
 on *Rattus niobe*, in Papua New Guinea 1005
- Guntheria wauensis**  
 sp. nov., description of 1968  
 in Papua New Guinea 1968  
 on *Rattus niobe*, in Papua New Guinea 1968
- Guntheria weedunnarti**  
 sp. nov., description of 1422  
 in Australia 1422  
 on *Sminthopsis leucopus*, in Northern Territory 1422
- Guppy** (see *Poecilia reticulata*)
- gutsevichi**, *Culicoides*
- Guyana**  
*Simulium* spp. in, on man 3318  
*S. incurtatum* in 3317
- guyanensis**, *Psorergatoides*
- Gymnodia ruficornis**, cocoon construction in 2196
- Gymnopais**  
 in Transbaikalia 1067  
 maxillary sensilla in 3309
- Gymnopleurus**, in cattle dung, in Bulgaria 1385
- Gyrophypus**, in dung, in USSR 1057
- Habronema microstoma**, in, Muscidae, in Dagestan 883
- Habronema muscae**, in, *Musca domestica*, in Tamil Nadu 2715
- Hadogenes bicolor**, activity in, rhythm of 315
- Haemagogus**  
 in dwellings, in Brazil 2627  
 on man, in Brazil 2627  
 yellow fever, virus in, in Brazil 2627
- Haemagogus leucocelaenus**, in Brazil 2627
- Haemaphysalis**  
 book 501  
 Congo virus in, transmission of 1945  
 in Indonesia 925  
 in Italy 3064  
 Kyasanur Forest disease, virus in, transmission of 3137  
*Theileria sergenti* in, transmission of 936
- Haemaphysalis bispinosa**, in India 2470
- Haemaphysalis cinnabarina punctata** (see *H. punctata*)
- Haemaphysalis concinna**  
 descriptions of 11  
 embryonic development in, effects of humidity on 717  
 habitats of 11, 3062  
 human activity as affecting 3411  
 in Italy 11, 3062  
 in USSR 3411  
 in Yugoslavia 701
- Haemaphysalis concinna** *contd.*  
 on *Apodemus*, effects on oxygen consumption of 1066  
 on deer, in Italy 3062  
 oviposition in, effects of humidity on 717
- Haemaphysalis flava**  
 in Japan 3085  
 parasitised by, *Hunterellus sagarensis*, in Honshu 3085
- Haemaphysalis inermis**, in Yugoslavia 701
- Haemaphysalis intermedia**, in India 2470
- Haemaphysalis japonica**  
 biology of 2734  
 habitats of 2734  
 hosts of 2734  
 human activity as affecting 3411  
 in USSR 2734, 3411
- Haemaphysalis kashmirensis**  
 in Iran 2750  
 on goat, in Iran 2750
- Haemaphysalis kopetdaghica**  
 descriptions of 241  
 in Iran 241, 2750  
 on goat, in Iran 241, 2750  
 taxonomy of 241
- Haemaphysalis kutchensis**  
 in India 3080  
 in Pakistan 3080  
 in USSR 3080  
 on *Asio flammeus*, in Tajikistan 3080
- Haemaphysalis leporispalustris**  
 development in, effects of temperature on 240  
 in Canada 240, 720  
 in USA 492, 1155, 2465, 3145  
 in Yugoslavia 701  
 on *Sylvilagus floridanus* in Indiana 3145  
 in USA 1155  
 resistance to 492  
 on *Tamias striatus*, in Canada 720  
 on wildlife, in Oklahoma 2465  
 oviposition in, effects of temperature on 240  
 survival in, effects of temperature on 240
- Haemaphysalis longicornis**  
 activity in 2462  
 behaviour in, effects of carbon dioxide on 2462  
 control of 258  
 human activity as affecting 3411  
 humidity preferences in 2473  
 in Australia 258, 3079  
 in India 3085  
 in Japan 3085  
 in USSR 3411  
 on *Bos indicus* × *B. taurus*, resistance to 3079  
 on cattle  
 in Honshu 3085  
 in New South Wales 3079  
 in Queensland 258  
 on *Cervus nippon*, in Maritime Territory 3411  
 parasitised by, *Hunterellus sagarensis*, in Honshu 3085  
 temperature preferences in 2473
- Haemaphysalis moschisuga**  
 sp. nov., description of 265  
 in China 265  
 on *Moschus berezovskii*, in Qinghai 265
- Haemaphysalis otophila** (see *H. parva*)
- Haemaphysalis parva**  
 in Iran 2750  
 in USSR 1060, 1366  
 on *Mus musculus*, in Crimea 1060  
 on *Ovis orientalis*, in Iran 2750
- Haemaphysalis punctata**  
*Babesia major* in, in UK 3398  
*B. motasi* in  
 in Wales 2472  
 transmission of 1410, 1948  
 habitats of 3062  
 in German Federal Republic 956  
 in Iran 2750  
 in Italy 3062, 3063, 3064  
 in Netherlands 1410  
 in Spain 2869  
 in UK 2472, 3086, 3398  
 in USSR 1071, 1688  
 in Yugoslavia 701  
 on bat, in Uzbekistan 1071
- Haemaphysalis punctata** *contd.*  
 on birds, in German Federal Republic 956  
 on cattle, in Wales 3086  
 on dog, in Wales 3086  
 on goat  
 in Iran 2750  
 in Italy 3062  
 on *Oryctolagus cuniculus*, in Spain 2869  
 on *Ovis orientalis*, in Iran 2750  
 on partridge, in Italy 3064  
 on sheep, in Netherlands 1410  
 seasonal abundance of 3086  
 tick-borne encephalitis, virus in, in Kirgizia 1688
- Haemaphysalis qinghaiensis**  
 sp. nov., description of 265  
 in China 265  
 on goat, in Qinghai 265
- Haemaphysalis simplicima**  
 sp. nov., description of 3060  
 in Malagasy Republic 3060  
 on *Echinops telfairi*, in Malagasy Republic 3060  
 on *Setifer setosus*, in Malagasy Republic 3060
- Haemaphysalis sulcata**  
*Coxiella burneti* in, in Kirgizia 1688  
 in Iran 2750  
 in Italy 3064  
 in USSR 1636, 1688  
 in Yugoslavia 701  
 on goat  
 in Iran 2750  
 in Italy 3064  
 on *Ovis orientalis*, in Iran 2750
- Haemaphysalis tibetensis**, in China 972
- Haemaphysalis warburtoni**, in China 972
- Haemaphysalis xinjiangensis**  
 sp. nov., description of 972  
 in China 972  
 on goat, in Xinjiang-Uighur 972
- Haematobia**, on zebu, in Malaysia 2538
- Haematobia irritans**  
 blood-meals in, measuring size of 1913  
 control of 2425, 2525  
 biological 1932  
 insecticides for 223, 470, 1367, 1915, 2422, 2430, 2446, 3010  
 digestive enzymes in 3369  
 in Canada 1915  
 in France 223  
 in Japan 470, 1379  
 in USA 1367, 1932, 2209, 2422, 2430, 2525, 2699, 3010  
 in cattle dung  
 effects on ammonia loss of 2425  
 in Georgia (USA) 2699  
 in USA 1932  
 Malpighian tubules in, phosphate retention in, sex differences in 671  
 on cattle  
 effects on growth rate of 470, 2422  
 in France 223  
 in Georgia (USA) 1367  
 in Japan 1379  
 in Kentucky 2430  
 in Ontario 1915  
 in Texas 3010  
 in Wyoming 2525  
 preyed on by, *Solenopsis invicta*, in Louisiana 2209  
 production in, effects of dung nitrogen on 2424  
 seasonal abundance of 1379, 2424  
 sex pheromone of 1898  
*Stephanofilaria assamensis* in, not infective 1891  
 traps for 2699
- Haematobia irritans exigua**  
 control of 258  
 development in, effects of temperature on 3033  
 in Australia 258  
 in cattle dung, effects of moisture on 1903  
 on cattle, in Queensland 258  
 ovaries in 898  
 puparium of, effects of dung conditions on 1903
- Haematobia irritans irritans**  
 antennae in, sensilla on 1607  
 courtship in 2432

- Haematobia thirouxi titillans***  
in USSR 1891  
*Stephanofilaria assamensis* in, in  
Uzbekistan 1891
- Haematobosca stimulans***  
in German Federal Republic 465  
on cattle, in German Federal Republic  
465
- Haematopinus apri***  
in German Democratic Republic 1721  
on deer, in German Democratic Republic  
1721
- Haematopinus eurytarnus***  
biology of 2853  
control of 258, 2853  
in Australia 258  
in Canada 1742  
in New Zealand 2290  
in USA 2853  
on cattle  
in Ontario 1742  
in Queensland 258  
in USA 2853
- Haematopinus longus***  
in China 1497  
on *Cervus unicorn*, in China 1497
- Haematopinus quadripertusus***  
biology of 2853  
control of 2853  
in USA 2853  
on cattle, in USA 2853
- Haematopinus suis***  
biology of 985  
control of 985  
insecticides for 346, 802, 1743  
in Canada 1743  
in German Democratic Republic 802  
in German Federal Republic 346, 1959  
in UK 985  
on pig  
effects of 985  
in German Democratic Republic 802  
in German Federal Republic 346,  
1959  
in Ontario 1743
- Haematopinus suis apri*** (see *H. apri*)
- Haematopinus tuberculatus***  
control of, insecticides for 2250  
in Brazil 2250  
on Asian buffalo, effects of 2250  
on camel, effects on blood of 1175
- Haematopota***  
hosts of, visual selection of 1376  
in Norway 1907  
in Soviet Far East 3348  
in USSR 2692, 3040  
in Uzbekistan 1070
- Haematopota assamensis***, in China 215
- Haematopota comodoliaci***  
sp. nov., description of 17  
in France 17
- Haematopota csikii***  
distribution of 17  
in France 17
- Haematopota guangshanensis***  
sp. nov., description of 215  
in China 215
- Haematopota kansuensis***  
descriptions of 215  
in China 215
- Haematopota lancangjiangensis***  
sp. nov., description of 215  
in China 215
- Haematopota pallens***  
feeding behaviour in 1078  
in USSR 1078, 2694  
on livestock, in Ukraine 1078
- Haematopota picea***, in China 215
- Haematopota pilosifemura***  
sp. nov., description of 215  
in China 215
- Haematopota pluvialis***  
activity in 2409  
control of, traps for 3338  
diurnal activity in 189  
in Czechoslovakia 189  
in France 223, 659  
in UK 3338  
in USSR 2409  
Mermithidae in, in France 659  
*Neoplectana tabanivora* in, infectivity of  
2693  
on cattle, in France 223
- Haematopota pluvialis* contd.**  
salivary glands in, sex differences in 187  
seasonal abundance of 189
- Haematopota qionghaiensis***  
sp. nov., description of 215  
in China 215
- Haematopota rara***, in Canada 2197
- Haematopota subcylindrica***  
diurnal activity in 189  
feeding behaviour in 1078  
in China 215  
in Czechoslovakia 189  
in USSR 1078, 2694  
on livestock, in Ukraine 1078  
seasonal abundance of 189
- Haematopota subirrorata***  
sp. nov., description of 215  
in China 215
- Haematopota wuzhishanensis***  
sp. nov., description of 215  
in China 215
- Haemogamasus***, on *Mus musculus*, in  
Crimea 1060
- Haemogamasus ambulans***  
development in, effects of temperature on  
995  
fecundity in, effects of temperature on  
995  
in USSR 3389  
on Rodentia, in Maritime Territory 3389
- Haemogamasus hirsutus***  
development in, effects of temperature on  
995  
fecundity in, effects of temperature on  
995
- Haemogamasus horridus***  
development in, effects of temperature on  
995  
fecundity in, effects of temperature on  
995  
in USSR 1046
- Haemogamasus nidi***  
development in, effects of temperature on  
995  
fecundity in, effects of temperature on  
995  
in Bulgaria 1659  
in Hungary 2244  
in USA 2302  
in USSR 1046  
on *Didelphis virginiana*, in Oregon 2302  
on small mammals, in Bulgaria 1659  
seasonal abundance of 1659
- Haemogamasus occidentalis***  
in USA 289  
on moles, in Oregon 289
- Haemogamasus onychomydis***  
in USA 2249  
on *Dipodomys ordii*, in Oregon 2249  
on *Perognathus parvus*, in Oregon 2249
- Haemogamasus pontiger***, in Hungary 2244
- Haemogamasus reidi***  
in USA 289, 2249  
on *Dipodomys ordii*, in Oregon 2249  
on *Scapanus townsendi*, in Oregon 289  
*Rickettsia prowazekii* in, not transmitted  
3066
- Haemogamasus serdjukovae***  
in USSR 3389  
on Rodentia, in Maritime Territory 3389
- Haemolaelaps***  
in Afrotropical region 3422  
on *Mus musculus*, in Crimea 1060
- Haemolaelaps glasgowi*** (see *Androlaelaps  
fahrenholzi*)
- Haemolaelaps ulysses***, group of, taxonomy  
of 3103
- haemorrhoidalis*, *Aphodius***  
***haemorrhoidalis*, *Cercyon***  
***haemorrhoidalis*, *Gasterophilus***  
***Haemosporidia***, phylogeny of 2624  
***hagenowii*, *Tetrastichus***  
***hainana*, *Whartonia***  
***hallae*, *Ornithocheyletia***  
Hallucinations, concerning noxious  
arthropods 1136
- Halprowiae***, tick lysozyme in, effects of  
2745
- Hammondia***, in, dog dung, in England 220
- hamoni*, *Sergentomyia***
- Hamster, golden (*Mesocricetus auratus*)**  
*Demodex aurati* on, in Israel 282  
*D. criceti* on, in Israel 282
- Hamster, golden contd.**  
*Dipetalonema viteae* in, effects of host  
gender on 697  
*Speleorodens clethrionomys* on, in Sweden  
1656
- haranti, *Culicoides***
- Hare, *Haemaphysalis japonica*** on, in  
Maritime Territory 2734
- Harmaline**, in *Amblyomma hebraeum*,  
ATPase inhibition by 2740
- Hart Park-Flanders viruses**, in, *Culicidae*, in  
Manitoba 1809
- Hart Park virus**, in, *Culex tarsalis*, in  
California 2081
- Hastaperla**, in rivers, as indicators of effects  
of insecticides 1292
- Hawaii**  
Acari in, on rodents 922  
*Aedes albopictus* in, on man 1796  
*Boydella nigra* in, on *Passer* 2237  
*Chrysomya megacephala* in, in fowl  
carcasses 480  
*Culex quinquefasciatus* in 1796  
*Lucilia cuprina* in, in fowl carcasses 480  
*Musca domestica* in, in poultry dung 480  
*M. sorbens* in, in cattle dung 480  
*Ophthalmognathus tenorioae* in, on  
*Nycticorax* 2237  
*Pulex simulans* in 2313
- haworthi, *Aedes***
- Hazel-hen** (see *Tetrastes bonasia*)
- HCH** (1,2,3,4,5,6-hexachlorocyclohexane)  
against  
*Anopheles* spp. 1075  
*A. atroparvus* 75  
*A. culicifacies* 3218  
*Choriotopes bovis*, on cattle 2761  
*Culex molestus* 75  
Diptera 532  
*Mansonia annulifera*, in dwellings  
2057  
*M. uniformis*, in dwellings 2057  
*Sarcoptes scabiei*, on camel 3093  
Triatominae, in dwellings 807, 1137  
*Wohlfahrtia magnifica*, on sheep 3349  
in mouse, effects on natural immunity of  
1013  
resistance to, in  
*Anopheles stephensi*, in India 2054  
*Choriotopes bovis*, in Scotland 2761  
*Culex quinquefasciatus* 3269  
vectors 2286  
with creolin 3349  
with DDT  
against  
*Anopheles atroparvus* 75  
*Culex molestus* 75
- $\gamma$ -HCH** (see Lindane)
- heaneyi, *Geomydoecus***
- Heart failure, congestive**, in cattle, caused  
by *Trypanosoma* 1299
- Heartwater** (see also *Cowdria ruminantium*)
- Hebecnema umbratica***  
in Bulgaria 902  
in cattle farms, in Bulgaria 902
- hebeiensis*, *Macrostylophora***
- hebes*, *Mesopsylla***
- hebraeum*, *Amblyomma***
- hebrideus*, *Aedes***
- Hedgehog**  
*Haemaphysalis japonica* on, in Maritime  
Territory 2734  
Ixodidae on, in Iran 2211
- Hedgehog, large-eared** (see *Hemiechinus  
auritus*)
- Helichrysum angustifolium*** (dried flowers),  
*Pyemotes zwoelferi* in, imported into  
France 1967
- Heliconia aurea***  
*Culex bishaicolus* on, in Venezuela 2362  
*Culicidae* in bracts of, in Venezuela 1222  
*Trichoprosopon digitatum* on, cohorts of  
2362  
*Wyeomyia felicia* on, in Venezuela 2362
- Heliothis virescens***, on man, hypersensitivity  
to 319
- Heliothis zea***  
*Nosema algerae* in, replication of 112  
*Vavraia culicis* in, culturing of 2891
- Helminths**, in, Carabidae 489
- helveticus*, *Culicoides***
- Hemagglutination inhibition tests**, for  
identifying insects in predator guts 1483



- Hemagglutinins**  
in mouse, effects of organochlorine insecticides on 1013  
in *Periplaneta americana* serum 2561  
in *Schistocerca gregaria* serum 2561
- hemapterus, Carnus**
- Hematin**  
in *Aedes aegypti* excreta 2076  
determination of 1564
- Hemiechinus auritus, Leishmania major** in, not infective for *Phlebotomus papatasi* 2146
- Hemiptera**  
bacteria in, in Kirghizia 1033  
*Culicimoryces clavosporus* in, not pathogenic 1829  
diapause in, review 1191  
in Sudan 2016  
in rice-fields, in California 2093  
on birds, in Kirghizia 1033  
preyed on by, *Gambusia affinis*, in California 2093  
taxonomy of 1719
- hemipterus, Cimex**
- Hemipyrrellia**, in Thailand 662
- Hemipyrrellia fernandica**  
*Entomophthora apiculata* in, in Nigeria 202  
in Nigeria 202
- hemiteles, Aedes cinereus**
- Hemlock, water** (see *Cicuta douglasii*)
- Hemocyanins**  
in *Androctonus australis*, subunits of 2779  
in *Androctonus mauretanicus* hemolymph 2253
- Hemoglobin**, in camel blood, effects of *Haematopinus tuberculatus* on 1175
- Hemolysins**  
in mouse, effects of organochlorine insecticides on 1013  
in *Stomoxys calcitrans*, properties of 892  
in *Stomoxys calcitrans* mid-gut 2705
- Hemorrhage**, in *Bos taurus* × *B. indicus*, caused by *Chrysomya bezziana* 663
- Hemorrhagic fever, Crimean, virus** (see Congo virus)
- Hemorrhagic fever, dengue**  
in Africa, review 2956  
in Malaysia 1245  
in Thailand 82  
in West Malaysia 2130  
rainfall and 2130  
review 390, 1220
- Hemorrhagic fever, Omsk, virus, tick transmission of** 3137
- Hemorrhagic fevers, viral**  
in Africa, review 2956  
small mammals and arthropod parasites in foci of 1046
- Hempa** (hexamethylphosphoric triamide) in *Cimex hemipterus*, effects of 2300  
in *Periplaneta americana*, effects on ovaries of 1165  
vapour pressure of 2272
- hendersoni, Cheyletus**
- 9-Hentriacontene, (Z)-**, in *Musca domestica* cuticle 2706
- HEOD** (see Dieldrin)
- Hepatitis B surface antigens**  
in *Cimex hemipterus*, excretion of 1511  
*C. lectularius*, persistence of 1512
- Hepatitis B virus**, in *Cimex lectularius*, transmission of 803, 1512, 2006
- Hepatoozon erhardovae**  
in *Clethrionomys* spp., in German Federal Republic 2331  
Siphonaptera, development of 2331
- Heptacosane, 4,5-dimethyl-**, with 11-methylnonacosane, and *cis*-2-octyl-3-tridecyloxirane, attractant for, *Musca domestica* 2700
- Heptacosane, 13-methyl-**, with muscalure, attractant for, *Musca domestica* 2700
- 9-Heptacosene, (Z)-**, *Haematobia irritans* sex-pheromone component 1898
- Heptagenia**, in rivers, as indicators of effects of insecticides 1292
- Heptanal**, repellent for, *Glossina* spp. 1881
- Heptatriacontane, 15,19,23-trimethyl-**arrestant for, *Glossina morsitans* 762
- Heptatriacontane, 15,19,23-trimethyl-** *contd.*  
*Glossina morsitans* responses to 648, 2679  
laboratory synthesis of 2683
- Herbicides**  
bioassay of, review 1455  
in *Culex molestus*, toxicity of 3289  
in rice-fields, not affecting Chironomidae 1624  
mosquitoes as affected by 2128
- hermani, Argas**
- Hermetia illucens**  
in USA 191  
in fowl dung, not affected by erythrosin B 191
- hermsi, Apallates (Hippelates)**
- hermsi, Hippelates** (see *Apallates hermsi*)
- hermsi, Ornithodoros**
- Herpetacarur pagumae**  
sp. nov., description of 2231  
in China 2231  
on *Herpetes urva*, in Fujian 2231  
on *Paguma larvata*, in Fujian 2231
- Herpetacarur spinosetosus**  
sp. nov., description of 2231  
in China 2231  
on *Rattus fulvescens*, in Fujian 2231  
on *Rattus nitidus*, in Fujian 2231  
on *Rattus niviventer*, in Fujian 2231
- Herpetacarur tengchongensis**  
sp. nov., description of 1667  
in China 1667  
on *Rattus rattus*, in Yunnan 1667
- Herpetes urva, Herpetacarur pagumae** on, in Fujian 2231
- hervei, Musca**
- hesperus, Latrodoctus**
- Heterocera**, in poultry housing, in England 1717
- Heteromeles arbutifolia**, insecticidal activity of shredded leaves of 2789
- Heterometrus**, on man, in India 1007
- Heterometrus bengalensis**, ecdysone analogues in, toxicity of 2782
- Heterometrus fulvipes**  
anoxia in, tolerance to 2494  
enzymes in 2783  
glycogen in, metabolism of 2783  
venom of 2784
- Heterometrus scaber**, venom of, components of 3434
- Heteromyidae**, mites on, in Oregon 2249
- Heteroptera**  
olfactory system in, evolution of 3132  
on man, in central Europe 803
- Heterorhabditidae**, in insects, book 1134
- Heterotylenchus autumnalis**, in, *Musca autumnalis*, development of, effects of host diet on 3025
- Hexachlorane** (see HCH)
- γ-Hexachlorane** (see Lindane)
- Hexadecanamide, N,N-dimethyl-**against, *Culex quinquefasciatus* 2107  
formulations of, emulsifiable concentrates 2107
- 1-Hexadecanamine, N,N-dimethyl-**, against, *Psoroptes* spp. 998
- hexagonus, Ixodes**
- hexagonus, Puncctoribates**
- Hexameris glossinae**  
sp. nov., description of 3320  
in *Glossina nigrofusca*, in Ivory Coast 3320  
*G. pallicera*, in Ivory Coast 3320  
*G. palpalis*, in Ivory Coast 3320
- Hexamethonium (N,N,N',N',N'-hexamethyl-1,6-hexanediaminium)**  
in guinea-pig, modification of effects of scorpion venom on heart by 309
- 1,6-Hexanediaminium, N,N,N',N',N'-hexamethyl-** (see Hexamethonium)
- 1,3-Hexanediol, 2-ethyl-** (see Ethyl hexanediol)
- Hexanema** (see Dichlofenthion)
- Hexanoic acid**  
*Culex* oviposition responses to 1209  
repellent for, *Glossina* spp. 1881
- hexodontus, Aedes**
- Hexokinase** (see Kinase (phosphorylating, hexo-))
- HHDN** (see Aldrin)
- hieroglyphicus, Culicoides**
- hilaris, Laelaps**
- hilli, Anopheles**
- hilli, Calliphora**
- hilli, Hirstionyssus**
- hingstoni, Onthophagus**
- Hippelates apicatus**, taxonomy of, transferred to *Liohippелates* 1832
- Hippelates bishoppi**, taxonomy of, transferred to *Liohippелates* 1832
- Hippelates collusor**, taxonomy of, transferred to *Liohippелates* 1832
- Hippelates convexus**, taxonomy of, transferred to *Apallates* 1832
- Hippelates dissidens**, taxonomy of, transferred to *Apallates* 1832
- Hippelates hermsi**, taxonomy of, transferred to *Apallates* 1832
- Hippelates microcentrus**, taxonomy of, transferred to *Apallates* 1832
- Hippelates pallipes**, taxonomy of, transferred to *Liohippелates* 1832
- Hippelates particeps**, taxonomy of, transferred to *Apallates* 1832
- Hippelates robertsoni**, taxonomy of, transferred to *Liohippелates* 1832
- Hippobosca camelina**, in Saudi Arabia 2533
- Hippobosca equina**  
control of, insecticides for 2820  
in Indonesia 2820  
on cattle, in Timor 2820
- Hippobosca longipennis**, in Saudi Arabia 2533
- Hippobosca maculata** (see *H. variegata*)
- Hippobosca variegata**  
control of, insecticides for 2820  
in Indonesia 2820  
in Saudi Arabia 2533  
in Upper Volta 644  
on cattle, in Timor 2820  
on goat, in Saudi Arabia 2533  
on sheep, in Saudi Arabia 2533
- Hippoboscidae**  
adaptive radiation in 2308  
in Czechoslovakia 190  
in Kazakhstan 681  
in Mongolia 3011  
in Nigeria 2003  
in Saudi Arabia 2533  
on birds, in USSR 1021  
on Passeriformes, in New Zealand 801
- Hipposideros galeritus, Afrolabidocarpus longipes** on, in Sumatra 2484
- hipposideros, Paraperigischrus**
- Hipposideros pratti, Afrolabidocarpus vietnamensis** on, in Vietnam 2484
- Hipposideros turpis, Paraperigischrus hipposideros** on, in Japan 505
- hippitis, Psoroptes** (see *P. cuniculi*)
- Hirstesia**, on bat, in Uzbekistan 1071
- Hirstionyssus butantanensis**, in Hungary 2244
- Hirstionyssus eusoricis**  
in USSR 1675  
on *Sorex araneus*, in USSR 1675  
on *Sorex minutus*, in USSR 1675  
taxonomy of, relation of *H. talpae* and 1675
- Hirstionyssus hilli**  
in USA 2249  
on Heteromyidae, in Oregon 2249
- Hirstionyssus incomptis**  
in USA 2249  
on *Dipodomys ordii*, in Oregon 2249
- Hirstionyssus isabellinus**  
host preferences in 921  
in Hungary 2244  
in Poland 323  
on *Mustela*, in Poland 323
- Hirstionyssus latiscutatus** (see *H. butantanensis*)
- Hirstionyssus talpae**, taxonomy of, relation of *H. eusoricis* and 1675
- Hirsutiella zachvatkini** (see *Neotrombicula zachvatkini*)
- hirsutus, Glaucops**
- hirsutus, Haemogamasus**
- hirtipes, Parasarcophaga** (see *Sarcophaga hirtipes*)
- hirtipes, Prosimulium**
- hirtipes, Sarcophaga** (*Parasarcophaga*)
- hirtipes, Xenopsylla**

- Hirudinea**, in ponds, effects of insect growth regulators on 3024
- Hirundinidae**  
arthropod parasites of, in Kirghizia 1033  
bacteria in, in Kirghizia 1033
- hirundinis, Ceratophyllus**
- hirundinis, Crataerina (Stenopteryx)**
- hirundinis, Stenopteryx** (see *Crataerina hirundinis*)
- Hirundo daurica, Ceratophyllus**  
*nanshanensis* on, in China 819
- Hirundo rustica**, Hippoboscidae in nests of, in Czechoslovakia 190
- hissaricus, Tabanus**
- Histamine** (see 1*H*-Imidazole-4-ethanamine)
- Histamine H1 receptor blockers**, in man, not affecting hypersensitivity to *Triatoma infestans* 3167
- Histeridae, Anoplocephala** spp. in, transmission of 686
- L-Histidine**  
in *Aedes aegypti* diet, utilisation of 2047  
in *Aedes togoi*, utilisation by *Brugia pateri* of 68  
in *Anopheles atroparvus*, utilisation by *Brugia pateri* of 68  
in *Latoia vivida* toxin 485
- HOE 33258**, in *Culiseta longiareolata*, chromosome banding pattern produced by 388
- Hog** (see Pig)
- Holarctic region**  
Chaoboridae in 2427  
Culicidae in 1219
- Holiday camps**, mosquito control in 1712
- holocyclus, Ixodes**
- holoprasinus, Goeldichironomus**
- hominis, Dermatobia**
- hominivorax, Cochliomyia**
- Homo sapiens** (see Man)
- Homo- $\gamma$ -linolenic acid** (see 8,11,14-Eicosatrienoic acid)
- Honduras**  
*Anopheles albimanus* in 2127  
malaria in 2127
- Honey**  
diet component for  
*Aedes dorsalis* 2052  
*Comperia merceti* 1737  
*Culicoides variipennis* 628  
*Solenopsis invicta* 482
- hookeri, Hunterellus**
- Hoplopleura**  
in Argentina 1475  
on small mammals, in Mexico 1465
- Hoplopleura acanthopus**  
in Poland 323  
in USSR 343, 1046, 2571  
on *Mustela*, in Poland 323  
on small mammals, in USSR 2571  
taxonomy of, characters distinguishing *H. edentula* and 343
- Hoplopleura affinis**  
in USSR 2571  
on small mammals, in USSR 2571
- Hoplopleura edentula**  
in USSR 343, 2571  
on *Clethrionomys glareolus*, in USSR 343  
on *Clethrionomys rufocanus*, in USSR 343  
on *Clethrionomys rutilus*, in USSR 343  
on small mammals, in USSR 2571  
taxonomy of, characters distinguishing *H. acanthopus* and 343
- Hoplopleura longula**  
in USSR 2571  
on small mammals, in USSR 2571
- Hoplopleura pacifica**  
in Burma 1496  
on small mammals, in Burma 1496
- Hoplopleura scuricola**  
in USA 1189  
on *Sciurus carolinensis*, in Tennessee 1189  
seasonal abundance of 1189
- Hoplopleuridae**, on small mammals, in Burma 1496
- Hoplopsyllus glacialis** (see *Euhoplopsyllus glacialis*)
- horacioi, Simulium**
- Hormones**  
formulations of, controlled release 2829
- Hormones contd.**  
in insects, book 3144
- horrerae, Radfordia**
- Hornet** (see *Vespa*)
- horokaense, Simulium**
- horridus, Haemogamasus**
- Horse (Equus caballus)**  
*Amblyomma variegatum* on 3060  
*Babesia* spp. in  
in South Africa 941  
in Zimbabwe 941  
*Boophilus microplus* on 3060  
*Culicoides* spp. on, in New York State 417  
ectoparasites of, in Philippines 2813  
*Epicauta lemniscata* on, diagnosis of poisoning by 230  
*Gasterophilus* spp. on, in Buryatia 442  
*G. intestinalis* on, in Morocco 2166  
*G. nasalis* on, in Morocco 2166  
louping ill, virus in, infectivity of 712  
Oestroidea on, book 2691  
*Otobius megnini* on 3060  
Peaton virus in, antibodies to 1253  
phenothiazine in, toxicity of 1012  
Phthiraptera on, in Afrotropical region, book 1177  
*Psoroptes cuniculi* on, in Queensland 3091  
*Ratemia asiatica* on, in China 2855  
*Rhinoestrus purpureus* on, in Buryatia 442  
*Stomoxys calcitrans* on, in Brazil 1908  
Tabanidae on  
defensive activity against 3034  
effects of host group size on 2185  
in Connecticut 1921, 2443  
in France 3034  
in Ukraine 1078  
western equine encephalitis, virus in, in Utah 381
- Horse dung**  
*Aleochara moesta* in 3344  
Scarabaeidae in, in Morocco 3385
- Horse farms, Stomoxys calcitrans** in, in USA 904
- Hospitals**  
ant control in, insect growth regulators for 2726  
*Blatta orientalis* in, in UK 3157  
Blattaria in, in England 1141  
*Dermatophagoides* spp. in, in Uttar Pradesh 2773  
*Periplaneta americana* in, in Philippines 1727  
pest control in 1145, 1146
- Hostels, Blatta orientalis** in, in UK 3157
- House dust**  
allergens of 517  
role of mites in 923, 1654, 1955  
*Austroglyciphagus* spp. in, in West Malaysia 1000  
*Cheyletus tenuipilis* in 300  
*Dermatophagoides* spp. in, in Uttar Pradesh 2773  
*D. farinae* in  
in Ohio 1420  
seasonal abundance of 1671  
*D. pteronyssinus* in  
estimating of 1956  
in Mexico 1127  
seasonal abundance of 1671  
enzymes in, and in mites 1964  
in man, hypersensitivity to 3108  
mites in 517, 1479  
in Denmark 280  
in different climates 3094  
in Japan 727  
in Peru 921  
Tarsonemina in, in Denmark 287  
*Thyreophagus gallegoi* in, in Spain 1971
- House-dust mites**, on man, hypersensitivity to, diagnosis of 3420
- House sparrow** (see *Passer domesticus*)
- howardii, Orchopeas**
- Howardula albopunctata**  
sp. nov., description of 1914  
in  
*Sepsis albopunctata*, in Andhra Pradesh 1914  
*S. nitens*, in Andhra Pradesh 1914  
life-cycle of 1914
- 5-HT** (see 1*H*-Indol-5-ol, 3-(2-aminoethyl)-)
- Huabangsha megachela**  
gen. et sp. nov., description of 996  
in China 996  
on *Mus famulus*, in Yunnan 996
- Huacho virus**, in *Ornithodoros amblus*, in Peru 275
- hueyi, Geomydoecus**
- Human blood**  
diet component for  
*Culiseta longiareolata* 2364  
*Forcipomyia taiwana* 418  
in *Glossina morsitans* diet, uptake from mid-gut of 1092  
platelet aggregation in, inhibited by *Rhodnius prolixus* saliva 3171
- Human cadavers**  
*Calliphora nociva* in, development of 3037  
*Lucilia sericata* in, development of 3037  
*Sarcophaga froggatti* in, development of 3037  
*Trichocera saltator* in, in UK 1602
- Human diseases**, role of blood-sucking arthropods in natural foci of 318
- Human feces**  
*Dryomyza anilis* in 2183  
Scarabaeidae in, in Morocco 3385
- humanus, Pediculus**
- humilis, Iridomyrmex**
- humilis, Tabanus**
- Hungary**  
Gamsoidea in, on subterranean mammals 2244  
*Hypoderma* spp. in, on cattle 878  
Mallophaga in 2012  
Siphonaptera in 2027, 2334
- Hunterellus hookeri**  
in German Federal Republic 3391  
parasitising, *Ixodes ricinus*, in German Federal Republic 3391
- Hunterellus sagarensis**  
in India 3085  
in Japan 3085  
parasitising  
*Haemaphysalis flava*, in Honshu 3085  
*H. longicornis*, in Honshu 3085
- hussaini, Hyalomma**
- huxsoli, Schoengastia**
- Hyalalla azteca**  
in USA 2412, 3024  
in ponds, effects of insect growth regulators on 3024  
in sewage ponds, effects of insect growth regulators on 2412
- Hyalomma**  
arboviruses in, transmission of 1826  
Congo virus in, transmission of 1945, 3137  
control of 1480  
*Dermatophilus congolensis* in, transmission of 777  
in Italy 3064  
on cattle, in Nigeria 245  
on livestock, in Mongolia 1480  
*Theileria annulata* in, transmission of 936
- Hyalomma anatolicum**  
*Coxiella burneti* in, in Kirgizia 1688  
habitats of 1072  
in India 2748  
in Iran 1637, 2211  
in USSR 1072, 1688  
*Mycobacterium* spp. in, persistence of 261  
on cattle, in Iran 2211  
Rickettsiaceae in, in India 2748  
Thogoto virus in, in Iran 1637, 2211  
Wad Medani virus in, in Iran 1637, 2211
- Hyalomma anatolicum anatolicum**  
enzymes in 934  
in Egypt 2752  
in India 1401  
life-cycle of 715  
on cattle, in Karnataka 1401  
seasonal abundance of 1401  
taxonomy of, isoenzymes as characters for 934
- Hyalomma anatolicum excavatum**  
enzymes in 934  
in Egypt 2752, 3394  
in Iran 2750  
in Spain 1117  
in USSR 1636



- Hyalomma anatolicum excavatum*** *contd.*  
in Yugoslavia 701  
*Nocardia farcinica* in, transmission of 502  
on cattle, in Egypt 3394  
on *Cervus elaphus*, in Spain 1117  
on domestic animals, in Turkmenia 1636  
on donkey, in Egypt 3394  
on *Ovis orientalis*, in Iran 2750  
seasonal abundance of 3394  
taxonomy of, isoenzymes as characters for 934  
*Theileria annulata* in, enzymes in 3077
- Hyalomma asiaticum***  
anatomy of, book 719  
in Iran 1637, 2211  
in USSR 1071  
olfactory sensilla in 3409  
on bat, in Uzbekistan 1071  
on goat, in Iran 2211  
sex pheromone of 2744  
Wanowrie virus in, in Iran 1637, 2211
- Hyalomma asiaticum caucasicum***  
in Iran 2750  
on goat, in Iran 2750  
on *Ovis orientalis*, in Iran 2750
- Hyalomma detritum***  
control of, acaricides for 955  
habitats of 1072  
in India 962  
in USSR 1072, 1636  
in Yugoslavia 701  
on cattle, in Punjab 962  
on domestic animals, in Turkmenia 1636  
spheroid areolar structures in 257  
*Theileria annulata* in, transmission of 962
- Hyalomma dromedarii***  
aggregation pheromone in 1648  
in Egypt 2752, 3394  
on cattle, in Egypt 3394  
seasonal abundance of 3394  
spotted-fever rickettsiae in, ultrastructure of 932
- Hyalomma hussaini***  
in India 1401  
on cattle, in Karnataka 1401  
seasonal abundance of 1401
- Hyalomma impressum***  
enzymes in 934  
on rabbit, immunity to 1939  
on sheep, immunity to 1939  
taxonomy of, isoenzymes as characters for 934
- Hyalomma kumari***  
in Iran 2750  
on goat, in Iran 2750
- Hyalomma marginatum***  
biology of 244  
*Coxiella burnetii* in, in Kirgizia 1688  
habitats of 3062  
in Italy 3062, 3063  
in USSR 1688  
*Listeria monocytogenes* in, effects on respiration of 250  
*Rickettsia sibirica* in, in Kirgizia 1688  
*Yersinia rodentium* in, effects on respiration of 250
- Hyalomma marginatum marginatum***  
in Iran 2750  
on goat, in Iran 2750  
on *Ovis orientalis*, in Iran 2750
- Hyalomma marginatum rufipes***  
*Anaplasma marginale* in, transmission of 950  
Congo virus in, replication of 2216  
in Egypt 2752  
in South Africa 1645  
in Zimbabwe 1638  
on cattle, in South Africa 1645  
seasonal abundance of 1638
- Hyalomma marginatum turanicum***  
habitats of 1072  
in Iran 2750  
in USSR 1072, 1636  
on goat, in Iran 2750  
on *Ovis orientalis*, in Iran 2750
- Hyalomma plumbeum*** (see *H. marginatum*)  
***Hyalomma plumbeum turanicum*** (see *H. marginatum turanicum*)
- Hyalomma rufipes*** (see *H. marginatum rufipes*)
- Hyalomma savignyi***, in Yugoslavia 701
- Hyalomma truncatum***  
in South Africa 1645  
in Zimbabwe 1638  
on cattle  
in South Africa 1645  
sweating sickness caused by 246  
preyed on by, *Buphagus erythrorhynchus* 1643  
seasonal abundance of 1638
- Hyaluronidase**  
in *Apis mellifera* venom, allergenicity of 3381  
in *Centruroides limpidus* venom 522
- Hybomitra***  
feeding behaviour in 2443  
hosts of, visual selection of 1376  
in Norway 1907  
in Soviet Far East 3348  
in USSR 2692, 3040  
in Uzbekistan 1070  
on cattle, in Connecticut 2443  
parasitised by, *Diglochis hybomitri*, in USSR 156
- Hybomitra acuminata***, in USSR 2694
- Hybomitra astur***, in USSR 2692
- Hybomitra auripila***  
descriptions of 217  
in France 217, 659  
parasitised by  
Pteromalidae, in France 659  
Scelionidae, in France 659
- Hybomitra bimaculata***  
activity in 2409  
in USSR 2409
- Hybomitra ciureai***  
activity in 2409  
feeding behaviour in 1078  
in USSR 1078, 2409, 2694  
on livestock, in Ukraine 1078
- Hybomitra difficilis***, in USA 661
- Hybomitra distinguenda***  
in France 223  
on cattle, in France 223
- Hybomitra erberi***  
in USSR 1024, 2694  
on rabbit, in Ukraine 1024
- Hybomitra expollicata***  
descriptions of 217  
in France 217
- Hybomitra lasiophthalma***  
blood-meals in 1899  
daily activity in 3015  
in USA 906, 907, 1899, 2167, 2431, 3015  
in floodplain forests, in Texas 906  
on cattle, distribution pattern of 1899  
parasites of, encapsulation of 2167  
parasitised by  
Bombyliidae, in Texas 2167  
*Macronychia* spp., in Texas 907  
parity in 906  
rearing of, techniques for 2431  
traps for 2431
- Hybomitra montana***  
in France 659  
parasitised by, Pteromalidae, in France 659
- Hybomitra montana reinigiana***, in USSR 1616
- Hybomitra muehlfeldi***  
diurnal activity in 189  
in Czechoslovakia 189  
seasonal abundance of 189
- Hybomitra nigricornis***, in USSR 2692
- Hybomitra nigricorpa***, in USSR 1616
- Hybomitra nitidifrons confiformis***  
activity in 2409  
in USSR 2409
- Hybomitra peculiaris***, in USSR 2694
- Hybomitra shnitnikovi***  
descriptions of 676  
in USSR 676
- Hybomitra tsushimaensis***  
sp. nov., description of 3022  
in Japan 3022  
on rabbit, feeding by 3022
- Hybomitra turkestanica***  
in USSR 1024  
on *Capreolus capreolus*, in Ukraine 1024  
on *Marmota*, in Ukraine 1024
- Hybomitra typhus***, in USA 661
- hybomitri***, *Diglochis*
- Hybosoridae**, in Saudi Arabia 2529
- Hydatigera taeniaeformis***, in, *Musca domestica*, persistence of 1900
- Hydrachna***, in aquatic habitats, effects of pirimiphos-methyl on 2942
- Hydrachna conjecta***  
in USA 2046  
parasitising, *Sigara ornata*, in New York State 2046
- Hydrachnellae**  
in ponds, effects of insect growth regulators on 3024  
parasitising  
Simuliidae, in Ukraine 1055, 1059  
*Simulium* spp., in Ukraine 1054
- Hydrilla***, *Anopheles annularis* ovipositing in water containing 2059
- Hydrilla verticillata***, *Anopheles annularis* ovipositing in water containing 2889
- Hydrobaenus minimus*** (see *Limnophyes minimus*)
- Hydrocarbons**, in *Solenopsis invicta* post-pharyngeal glands 2203
- Hydrodromidae**, parasitising, Culicidae, in New York State 3254
- hydroides***, *Prosimulium* (*Twinnia*)
- hydroides***, *Twinnia* (see *Prosimulium hydroides*)
- Hydrolase**, in *Calliphora vicina* hemolymph, activity pattern of 882
- Hydrolase**, methenyltetrahydrofolate cyclo-, in *Aedes aegypti*, properties of 838
- Hydromermis***, in, *Aedes* spp., in Kazakhstan 88
- Hydrophilidae**  
in cattle dung, successions of 490  
in dung, in UK 228  
seasonal abundance of 228
- Hydroprene** (ethyl (2E,4E)-3,7,11-trimethyl-2,4-dodecadienoate)  
against  
*Culex pipiens* 1754  
*Ixodes persulcatus* 254  
*I. ricinus* 254  
*Psoroptes cuniculi* 2767  
in *Culex pipiens*, effects of 1754
- Hydropsyche***, in rivers, as indicators of effects of insecticides 1292
- Hydropsyche angustipennis***  
in USSR 642  
preying on, *Simulium mediterraneum*, in Ukraine 642
- hydrosauri***, *Aponomma*
- Hydrotaea irritans***  
control of, insecticides for 3048  
*Corynebacterium pyogenes* in, transmission of 890  
habitats of 890  
in Bulgaria 902  
in France 223  
in Irish Republic 2182  
in Netherlands 890  
in UK 3048  
in cattle farms, in Bulgaria 902  
on cattle  
in France 223  
in Netherlands 890  
in UK 3048  
on *Cervus*, in Irish Republic 2182  
on sheep, in UK 3048  
predators of, in Irish Republic 2182
- Hydrotaea militaris***, in China 1618
- Hydryphantidae**, parasitising, Culicidae, in Quebec 2354
- hygropetricus***, *Metriocnemus*
- Hylemya antiqua*** (see *Delia antiqua*)
- Hylemya strenua***  
in UK 220  
in dog dung, in England 220
- Hylomys suillus***, *Cratynius yunnanus* on, in China 3180
- Hylopecheyia malayi***  
sp. nov., description of 2771  
in Malaysia 2771  
on *Tupaia glis*, in West Malaysia 2771
- Hylopetes spadicus***, *Cheyletus bidentatus* in nests of, in West Malaysia 2771
- Hymenolepis diminuta***  
in  
*Ctenocephalides felis*, infectivity of 366  
*Tenebrio molitor*  
effects of temperature on 1390  
effects on water balance of 1390

- Hymenolepis diminuta** *contd.*  
in *contd.*  
*Tribolium confusum*  
effects of 1391  
effects of mebendazole on 1625  
*Xenopsylla cheopis*, infectivity of 366
- Hymenolepis nana**, in, *Tribolium confusum*,  
effects of mebendazole on 1625
- Hymenolepis uncinata**, in, *Silpha carinata*, in  
Bulgaria 689
- Hymenoptera**  
fenethacarb in, toxicity of 1530  
on man  
hypersensitivity to 319  
stings by 3052  
taxonomy of 1719  
venoms of, toxicity to mouse of 2205
- Hyperemia**  
in *Bos taurus* × *B. indicus*, caused by  
*Boophilus microplus* 3073  
in cattle, caused by *Boophilus microplus*  
3073
- Hyperglycemia**, in rat, caused by malathion,  
effects of drugs on 750
- Hyperkeratosis**, in guinea-pig, caused by  
*Trixacarus caviae* 1978
- Hyperlaelaps arvalis**, in Hungary 2244
- Hyperlaelaps microti**  
in Czechoslovakia 2232  
on *Microtus arvalis*, in Czechoslovakia  
2232
- Hyperplasia**, in man, caused by *Demodex*  
726
- Hypersensitivity**  
to *Apis mellifera*, in man 3383  
to *Apis mellifera* venom, in man 1933,  
2459  
to arthropods, in man 319, 2828  
to Blattaria, in man 2132  
to *Cheyletiella yasguri*, in man 12  
to *Cladotanytarsus lewisi*, in man 1596  
to *Culex quinquefasciatus*, in man 2132  
to *Dermatophagoides farinae*, in man  
1420, 3108  
to Formicidae, in man 2132  
to Hymenoptera, in man, diagnosis of  
2455  
to Hymenoptera stings  
in man 1930  
diagnosis of 1389  
to insect diets, in man 319  
to *Macrothylacia rubi*, in man 690  
to *Musca domestica*, in man 2132  
to *Otodectes cynotis*, in cat 296  
to *Triatoma infestans*, in man 3167  
to Vespidae, in man 3383  
to *Vespula*, in man 1386, 1634
- Hypersensitivity**, delayed, to Ixodoidea, in  
cattle 952
- Hypersensitivity**, immediate  
to *Boophilus microplus*, in cattle 1395  
to *Ctenocephalides felis*  
in cat 363  
in dog 363  
to Ixodoidea, in cattle 952
- Hypersensitivity**, respiratory (see  
Respiratory hypersensitivity)
- Hypertension**  
in man, caused by scorpion stings 2256  
in rat, caused by melittin 1929
- Hypoaspis**  
in rodent nests, in Transbaikalia 1032  
on *Suncus murinus*, in Burma 2775
- Hypoderma**  
control of 1480, 2525  
insecticides for 878, 3330  
non-target effects of 3009  
in Tadzhikistan 154  
on cattle  
in Hungary 878  
in USSR 3330  
in Wyoming 2525  
on livestock, in Mongolia 1480
- Hypoderma bovis**  
control of 440, 653  
insecticides for 1590, 1591, 2407,  
2689, 3329  
repellents for 2689  
timing of 1591  
eggs of, attachment organ of 3333  
in Canada 3329  
in Czechoslovakia 2690  
in UK 653
- Hypoderma bovis** *contd.*  
in USSR 440, 1590, 1591, 2689  
oococytes in, development of 1592  
on cattle  
antibodies to 1889  
diagnosis of 652  
effects on growth rate of 3329  
immunity to 440  
in Czechoslovakia 2690  
in UK 653  
in USSR 1590, 1591, 2689  
on man, diagnosis of 652  
population dynamics of 2690
- Hypoderma diana**  
in German Democratic Republic 1721  
on deer  
diagnosis of 652  
in German Democratic Republic 1721  
on man, diagnosis of 652
- Hypoderma lineatum**  
control of 653  
insecticides for 441, 2407, 2689, 3329  
repellents for 2689  
eggs of, attachment organ of 3333  
enzymes in 877, 1593  
in Canada 3329  
in Spain 1117  
in UK 653  
in USA 441, 2407  
in USSR 2689  
oococytes in, development of 1592  
on cattle  
antibodies to 1889  
diagnosis of 652  
effects on growth rate of 3329  
in Indiana 2407  
in Texas 441  
in UK 653  
in USSR 2689  
on *Cervus elaphus*, in Spain 1117  
on man, diagnosis of 652  
seasonal abundance of 2407
- Hypodermatidae**  
control of 2691  
in Mongolia 3011  
in Nigeria 2003  
on livestock, book 2691
- Hypodermis-chlorophos** (see Trichlorphon)
- Hypopygiopsis**, in Thailand 662
- Hyposensitization therapy** (see  
Desensitization, immunologic)
- Hypotension**, in rat, caused by  
phospholipase A<sub>2</sub> 1929
- Hypoxanthine phosphoribosyltransferase**  
(see Phosphoribosyltransferase,  
hypoxanthine)
- Hypozetes**, *Moniezia expansa* in 2837
- Hypsophthalmus campestris**, in Burundi 49
- hyrcanus**, *Anopheles*
- Hystrichopsylla**, taxonomy of 2580
- Hystrichopsylla rotundisinuata**  
sp. nov., descriptions of 2580  
hosts of 2580  
in China 2580
- Hystrichopsylla talpae**  
in Czechoslovakia 362  
in Hungary 2334  
in Poland 323  
in *Citellus citellus* nests, in  
Czechoslovakia 362  
on *Mustela*, in Poland 323
- Hystrichopsylla talpae riouxi**  
descriptions of 3183  
in Morocco 3183  
on *Crocodyrus russula*, in Morocco 3183
- Hystrichopsylla weida yunnanensis**  
ssp. nov., description of 569  
in China 569  
in *Anourosorex squamipes* nests, in  
Yunnan 569  
in *Eothenomys miletus* nests, in Yunnan  
569
- Hystrichopsyllidae**, on small mammals, in  
Morocco 3183
- hyugaensis**, *Tabanus*
- ibariense**, *Simulium*
- Ichneumonidae**  
adaptive radiation in 2308  
preyed on by, *Loxosceles reclusa*, in Iowa  
3430
- Ichoronyssus**, on bat, in Uzbekistan 1071
- ICI-11430**, against, *Rhipicephalus*  
*sanguineus*, on dog 1459
- Idaho**  
*Culicoides variipennis* in, viruses in 3282  
*Geomydoecus idahoensis* in, on  
*Thomomys* 31
- idahoensis**, *Geomydoecus*
- IgA** (see Globulins, immune, A)
- IgE** (see Globulins, immune, E)
- Illinois**  
*Aedes vexans* in 2041, 2612  
Chironomidae in, on man 912  
*Vespula germanica* in 2460
- illinoisensis**, *Geomydoecus*
- illustris**, *Lucilia*
- IH-Imidazole-4-ethanamine** (histamine)  
in cattle, transported to tick attachment  
sites by eosinophils 2471  
in cattle skin, role in resistance to  
*Boophilus microplus* of 1395  
in *Latoia vivida* toxin 485  
in Simuliidae, causing toxic symptoms in  
cattle 1290
- Imidazolidine, 1,3-bis(3-chlorophenyl)-2-**  
(trichloromethyl)-, against, *Ixodes ricinus*  
1639
- Immune sera**  
for treating Simuliid toxicosis in cattle  
1290  
to *Acarus siro* 1669  
to ecdysteroids 787, 2173  
to *Loxosceles reclusa* venom 2498  
to *Simulium* 1849  
to *Tyrollichus casei* 1669
- Immunity**  
to *Hypoderma bovis*, in cattle 440  
to Ixodoidea, in cattle, review 952  
to *Ornithonyssus sylvarum*, in fowl  
2764
- Immunity, natural**, in mouse, effects of  
organochlorine insecticides on 1013
- Immunization**  
of cattle  
against *Babesia* 1938  
against *Babesia bigemina* 948  
against *Babesia bovis* 948  
against *Babesia divergens* 946  
against *Cowdria ruminantium* 945  
against Ixodoidea 952  
against Simuliidae 1290  
against *Theileria annulata* 944  
against ticks 714  
of guinea-pig, against *Dermacentor*  
*andersoni* 3067  
of mouse, against *Dermatophagoides*  
*farinae* 1418  
of rabbit, against *Dermatobia hominis*  
1588, 1589, 3334  
of rat, against *Dermacentor variabilis*  
1407  
of vertebrates, against Ixodidae 3390
- Immunoelectrophoresis**, for identifying mite  
blood-meals 1954
- Immunosuppression**, in man, relation of  
Norwegian scabies and 291
- Immunotherapy**, for treatment of  
hypersensitivity to house-dust mites  
2763
- Impala** (see *Aepyceros melampus*)
- impar**, *Walchiella*
- impatiens**, *Eucoila*
- imphalum**, *Leptotrombidium*
- implicatus**, *Aedes* (see *A. leucomelas*)
- impressum**, *Hyalomma*
- impressus**, *Cercyon*
- incidens**, *Culiseta*
- incisellus**, *Ceratozetes* (*Latilamellobates*)
- incisellus**, *Latilamellobates* (see *Ceratozetes*  
*incisellus*)
- incisilobata**, *Sarcophaga* (*Thyrsoecnema*)
- incisilobata**, *Thyrsoecnema* (see *Sarcophaga*  
*incisilobata*)
- incomptis**, *Hirstionyssus*
- incrastatum**, *Simulium*
- India**  
*Amphipsylla* spp. in, on Rodentia 3186  
*Anopheles* spp. in 2054, 2372  
natural enemies of 2622  
*A. balabacensis* in 624  
*A. barbirostris* in, viruses in 2620  
*A. culicifacies* in 81, 103, 572, 607,  
2382, 3217  
natural enemies of 609  
sporozoites in 3222  
*A. fluviatilis* in 3270



**India contd.**

- Anopheles* contd.  
*A. hyrcanus* in, viruses in 2620  
*A. stephensi* in 2373  
*A. sundaus* in, on man 2058  
*Blattaria* in, bacteria in 795  
*Boophilus microplus* in, on cattle 2746  
*Cimex lectularius* in 2562  
in animal housing 2562  
Crimean hemorrhagic fever in 1945  
*Ctenocephalides canis* in, rickettsiae in 2343  
*Culex* spp. in  
natural enemies of 2622  
on fowl 573  
*C. quinquefasciatus* in 102, 606, 608, 2600, 3223  
nematodes in 2599, 2888  
*C. tritaeniorhynchus* in 1557  
*C. vishnui* in, viruses in 2620, 3276  
*C. whitmorei* in, viruses in 3276  
Culicidae in 2623, 2640, 3275  
*Dermatophagoides farinae* in 2773  
*D. pteronyssinus* in 2773  
Diptera in, in zoological gardens 3189  
Formicidae in, bacteria in 795  
*Goniocotes gallinae* in, on poultry 32  
*Hyalomma anatolicum* in, rickettsiae in 2748  
*H. detritum* in, on cattle 962  
insect taxonomy in 14  
Ixodidae in, on cattle 1401  
leishmaniasis in 1260, 1261  
malaria in 2058, 2372, 2373, 3217  
*Mansonia annulifera* in 102, 2057  
*M. uniformis* in 2057  
Meloidae in 227  
*Menopon gallinae* in, on poultry 32  
mosquito control in 2054  
*Musca* spp. in, in dwellings 1595  
*M. domestica* in 2452  
in cattle farms 3018  
natural enemies of 1357  
nematodes in 2715  
Nycteribiidae in, on bats 2697  
*Onthophagus subansariensis* in, in cattle dung 1629  
*Periplaneta americana* in, natural enemies of 793  
Phlebotominae in 1261, 1262, 1265, 1267  
*Phlebotomus argentipes* in 1260, 1263, 2662  
on man 1845  
*P. papatasi* in 1263, 2662  
*Rhipicephalus* spp. in, rickettsiae in 2748  
*R. sanguineus* in, rickettsiae in 2470  
*Sarcoptes scabiei* in  
on Asian Buffalo 3417  
on camel 3093  
on man 3417  
Scarabaeidae in 2724  
Scorpiones in, on man 1007  
*Sepsis albopunctata* in, natural enemies of 1914  
*S. nitens* in, natural enemies of 1914  
*Sergentomyia* spp. in, flagellates in 1266  
*S. baghdadis* in, on man 1260  
*S. shorttii* in 1264  
on man 1260  
Siphonaptera in, research on 2337  
Streblidae in, on bats 2697  
tick taxonomy in 705  
Trombiculidae in, rickettsiae in 3090  
**Indian subregion, Dirhinini in 3056**  
**Indiana**  
*Aedes atropalpus* in, in tyres 3251  
*A. triseriatus* in 2902, 3280  
viruses in 2900  
*A. trivittatus* in, viruses in 2900  
*A. vexans* in 2040  
*Culex* spp. in, viruses in 2900  
*C. pipiens* in 1791, 2040  
*C. restuans* in 2901  
Culicidae in 1789, 1790  
*Hypoderma lineatum* in, on cattle 2407  
*Musca domestica* in, in fowl dung 3012  
*Sylvilagus floridanus* in, ectoparasites of 3145  
Trombiculidae in, on mammals 1966  
*Vespa germanica* in 2460  
**indica, Ascoschoengastia**  
**indica, Sergentomyia**

- 1H-Indole, Cochliomyia hominivorax**  
responses to 1896  
**1H-Indol-5-ol, 3-(2-aminoethyl)- (5-HT; 5-hydroxytryptamine; serotonin)**  
in *Nauphoeta cinerea*, effects on salivary glands of 333  
in *Tabanus proximus*, effects on oviduct contractions of 3341  
**Indonesia**  
*Aedes aegypti* in 1555  
*A. albopictus* in 1556  
*Afrolabidocarpus longipes* in, on *Hipposideros* 2484  
*Anopheles* spp. in 2067  
*A. aconitus* in 2127  
*A. koliensis* in, sporozoites in 1776  
*A. punctulatus* in, sporozoites in 1776  
*A. subpictus* in 1777  
*A. sundaus* in 1554, 2127  
*Argas* spp. in 2807  
*Blankaartia dohanyi* in, on *Egretta* 981  
Culicidae in 1777  
Diptera in, in zoological gardens 3189  
ectoparasites in 2802  
*Hippobosca* spp. in, on cattle 2820  
Ixodidae in 925  
Ixodoidea in, on cattle 2820  
*Leptotrombidium arenicola* in  
on rodents 2810  
rickettsiae in 2810  
*L. deliense* in, on *Rattus* 1961, 1963  
*L. fletcheri* in, on *Rattus* 1961  
malaria in 2127  
mites in, on domestic animals 2806  
*Neopsylla sondaica* in 565, 1190  
on small mammals 817  
*Ornithodoros* spp. in 2807  
Sarcophagidae in 3337  
*Stivalius cognatus* in 565, 1190  
on *Rattus* 3188  
on Rodentia 2819  
on small mammals 817  
*Stomoxys* spp. in, on cattle 2820  
vector-borne diseases in 2802  
vector research in 2801  
*Whartonia kulumadousensis* in, on *Dobsonia* 2235  
*W. teongwahi* in, on bats 730  
*Xenopsylla cheopis* in 565, 1190  
on *Rattus* 3188  
on Rodentia 2819  
on small mammals 817  
**Indoplanorbis exustus**, for controlling scum  
on mosquito-rearing water 2059  
**indosinica, Javanica**  
**inermis, Gasterophilus**  
**inermis, Haemaphysalis**  
Infectious disease, eradication of 2285  
**infestans, Triatoma**  
Inflammation, in man, caused by  
*Ornithodoros ambius* 275  
**infrequens, Thermocyclops**  
**ingrami, Sergentomyia**  
**Inkoo virus**, in, *Aedes albopictus*, persistent  
infection with 1839  
**Inokosterone** (see Cholest-7-en-6-one,  
2,3,14,20,22,26-hexahydroxy-,  
(2 $\beta$ ,3 $\beta$ ,5 $\beta$ ,22R)-)  
**inornata, Culiseta**  
**inornatipennis, Culicoides**  
Inosine kinase (see Kinase  
(phosphorylating), inosine)  
**myo-Inositol**, in *Dermacentor andersoni*,  
developmental changes in 1400  
**Insect collections**, type specimens in New  
York State Museum 2276  
**Insect diets**, human hypersensitivity to 319  
**Insect growth regulators**  
bioassay of, review 1455  
book 2262  
formulations of, controlled release 2829  
in Culicidae, determining susceptibility to  
2890  
in insects  
developmental responses to 2834  
effects of, review 3150  
in *Rhodnius prolixus*, effects on follicle  
extracellular spaces of 1499  
insect control using, review 2838  
resistance to, review 1683  
specifications for 526

**Insect growth regulators contd.**

- substances tested as:  
aryl terpenoid ethers 1762  
benzoylureas 1449  
cholesterol-synthesis inhibitors 804  
cyanamide 1372  
ethanethioamide 3356  
juvabione analogues 1986  
pine resin 1011  
plant oils 2879  
spruce resin 1011  
thiirane analogues of oxirane-containing  
growth regulators 1988  
**Insecticide resistance**  
in Culicidae 2633  
not affecting susceptibility to *Bacillus*  
 2924  
in vectors 2286  
management of 1683  
review 1683  
**Insecticides**  
aerosols, model for quantitative efficiency  
of 1218  
bioassay of, review 1455  
book 2262, 2787  
determining susceptibility of Culicidae to  
2645, 3219, 3220  
determining susceptibility of Simuliidae to  
2675  
formulations of  
controlled release 2829  
microencapsulated 1733  
in arthropods, penetration of cuticle by  
3131  
in rice-fields, not affecting Chironomidae  
1624  
insect pharmacokinetics of, model 2788  
microbial, registration of 1540  
mobile mist generator 3351  
organophosphate  
delayed neurotoxicity of, review 3135  
ophthalmological effects of 3128  
screening of, against *Musca domestica*  
1682  
substances tested as:  
*Acorus calamus* extracts 1561  
alkanamides 2106, 2263  
alkyl phenyl (dichloromethyl)phosphon-  
ates 2506  
alkyl phenyl ketone oxime *O*-benzyl  
ethers 1444  
amidinohydrazones 759  
antibiotics 1056  
aquatic-plant extracts 2355  
4-aryl-3-naphthylimino-5-imino-1,2,4-  
thiadiazolidines 2504  
avermectins 346, 2433  
*Azadirachta indica* extracts 1561, 3216  
aziridine analogues of pyrethroids  
2264  
*Blumea* extracts 2056  
citral 3124  
2-(dialkylamino)-4-nitrophenyl  
carbamates 2507  
Diels-Alder adducts of fulvenes and  
halogenated dienes 749  
DOPA decarboxylase inhibitors 1382  
fenvalerate isosteres 1985  
fluorinated pyrethroids 1439  
furocoumarins 317, 2796  
garlic extracts 2792  
*Heteromeles arbutifolia* shredded leaves  
2789  
mucilaginous seeds 2601  
1-naphthylamidino-1-arylthiocarbamide  
dihydrochlorides 2504  
*Ocimum sanctum* extracts 1561  
optically-active phenylphosphonothio-  
ates 1450  
*N*-phenylsulfonyl derivatives of  
carbofuran and propoxur 2265  
picrotoxinin analogues 2261  
plant oils 2879  
pyrethroids 1438  
pyrethroids not containing cyclopropane  
ring 1442  
pyrethroids with acyclic carboxylic  
acids 2508  
pyrethroids with heterocyclic alcohols  
2502  
pyrethroids with oxime linkage 1446  
*Tagetes erecta* extracts 3127  
*T. patula* extracts 3127

**Insecticides contd.**

- substances tested as: *contd.*  
 1,2,4-triazole derivatives 311  
 volcanic ash 3126  
 use of, prodigal or precise, review 760

**Insectivora**

- arboviruses in, in Spain 2233  
 Trombiculidae on, in Indiana 1966

**Insects**

- acetylcholine receptors in 1159  
 asymmetrical competition in 2282  
 behaviour in, book 535  
 blood-feeding in, evolution of 1170  
 book 540, 1725, 2823  
 circulatory system in, terminology for 2284  
 common names of  
   in Australia 1454  
   in German Federal Republic 545  
 cultures of, catalogue 1999  
 cuticle in 1159  
   techniques, book 3131  
 cytogenetics of, book 1995  
 diapause in, review 1191  
 ecdysis in 1159  
 ecology of, book 3146  
 ectoparasitic, sex ratio in 2281  
 eggs of, book 2280  
 endocrinology of, conference 2834  
 excretory system in 2279  
 genitalia in, PVC vials for 1017  
 heat production and motor activity in 1027  
 hemocytes in, book 544  
 hermaphroditism in 549  
 identification of, reference guide 538  
 in Australia, book 3151  
 intercellular junctions in 1159  
 juvenile hormones in  
   regulation of, review 3134  
   review 3150  
 light polarisation analysis in, review 2830  
 medically-important, in Mauritius 3141  
 morphological terms 2827  
 morphology of, book 2512  
 nervous system in  
   amines in 1159  
   research techniques, book 3143  
 neurohormones in, research techniques, book 3144  
 nutrition of, conference 2834  
 olfactory system in 537, 541  
 on game animals, in Africa, bibliography 13  
 on man, hypersensitivity to 2828  
 pathogens of, role in population dynamics of 2839  
 pesticides in  
   effects on nervous system of 329  
   penetration of 2503  
 pheromones in, review 1716  
 photoperiodism in, review 2278  
 phylogeny of, book 2511  
 physiology of, book 1685  
 problems of observing living 780  
 Protozoa in, review 3136  
 radiation techniques with 2825  
 receptors in, conference 1998  
 relaxing of 2515  
 temperature sensors in 389  
 tracheoles in, review 2835  
 trehalose in, review 330  
 vision in, book 2004  
**Insects as food** 1623  
*Insidiosus, Orius*  
*insignis, Myodopsylla*  
*insinuatus, Culicoides*  
*insperata, Stenoponia tripectinata*  
*Insulin, in Boettcheris peregina,*  
   suppressing growth of cell lines 886  
*Integella, Rhadinopsylla*  
**Integrated control**  
 of arthropods  
   *Aedes* spp., in wildlife areas 2121  
   *Boophilus microplus* 1124  
   Culicidae 3203  
   *Glossina* spp. 1325  
   *G. morsitans* 1089  
   *G. palpalis* 1884  
   *Stomoxys calcitrans* 1090  
*intermedia, Haemaphysalis*

*intermedia, Lutzomyia* (Psychodopygus)*intermedia, Wohlfahrtia**intermedium, Leptotrombidium**intermedius, Psychodopygus* (see *Lutzomyia intermedia*)*interpunctella, Plodia**intestinalis, Gasterophilus**intrudens, Aedes**Inulin, in Musca domestica,* permeability of

## Malpighian tubules to 3029

**Invertase** (see Fructofuranosidase,  $\beta$ -)**Invertebrates**, pathogens of, role in

## population dynamics of 2839

*invicta, Solenopsis**invisitata, Schoengastia**Iodofenphos* (O-(2,5-dichloro-4-iodophenyl)

## O,O-dimethyl phosphorothioate)

## against

*Alphitobius diaperinus*, in dwellings

## 486

*Carcinops pumilio*, in dwellings 486*Dermestes maculatus*

## in dwellings 486

## in poultry housing 3057

*Musca domestica* 773*Pediculus capitis* 345

## on building materials, persistence of 203,

## 773

## WHO data sheet on 3120

*ioffi, Catallagia***Iowa***Loxosceles reclusa* in 3430*Psorophora cyaneus* in 385*Trixacarus caviae* in, on guinea-pig 1978*Ursicoptes procyoni* in, on *Procyon* 737*Ipomoea reptans, Anopheles* spp. associated

## with, in Irian Jaya 1776

*ipsilon, Agrotis***Iran***Anopheles maculipennis* in 2911*A. sacharovi* in 2127*A. stephensi* in 2127, 2912*Argas vulgaris* in, viruses in 2211, 2758*Haemaphysalis kopetdaghica* in, on goat

## 241

*Hyalomma anatolicum* in, viruses in

## 1637, 2211

*H. asiaticum* in, viruses in 1637, 2211*Ixodoidea* in

## on goat 2750

on *Ovis orientalis* 2750*Linognathus* spp. in, on sheep 503

## malaria in 2127

*Nosopsyllus iranensis* in, bacteria in 364*Ornithodoros lahorensis* in, viruses in

## 1637, 2211

*Psoroptes ovis* in, on sheep 503*Xenopsylla conformis* in, bacteria in 364*iranensis, Nosopsyllus***Iraq***Anopheles pulcherrimus* in 2917*A. sacharovi* in 2127, 2917*A. stephensi* in 2127, 2917

## arthropods of medical importance in

## 3142

## arthropods of veterinary importance in

## 3142

## malaria in 2127

*Iridomyrmex humilis*, in Australia 533**Iridoviridae**

## in

*Aedes stramineus*, histopathology of

## 3288

*A. taeniorhynchus*, site of entry of

## 1819

## Culicidae

## in Ukraine 1025

## in USSR 1038

## invertebrates, review 525

## Simuliidae, in Guatemala 144

*iriomotensis, Aedes***Irish Republic**

## Aculeata in 691

## cattle-dung fertilizer in, arthropod fauna

## of 324

*Hydrotaea irritans* in, natural enemies of

## 2182

*Ixodes ricinus* in, on cattle 1635*Mesostigmata* in 302**Iron, in Simulium** breeding water 2666**Irrigation***Glossina* as affected by 1874

## malaria and 3217

**Irrigation contd.**

## mosquito breeding sites as affected by

## 852

## of rice-fields

effects on *Culex tarsalis* of 2115

## role in fly control of 532

## trypanosomiasis as affected by 1874

**Irrigation canals***Culex tarsalis* in, in California 2345

## weed control in, role in mosquito control

## of 2345

**Irrigation systems**

## mosquito control in, biological 3272

## weed control in, non-target effects of

## 3272

*irritans, Haematobia* (Lyperosia)*irritans, Hydrotaea**irritans, Lyperosia* (see *Haematobia irritans*)*irritans, Pulex**isabellinus, Hirstionyssus**Isathrin* (see Bioresmethrin)*Ischnocera*, on vertebrates, in Afrotropical

## region, book 1177

*Ischnopsyllidae*, combs in, functions of

## 2309

*Ischyropoda armatus*

## in USA 2249

## on Heteromyidae, in Oregon 2249

*Ischyropoda furmani*

## in USA 2249

## on Heteromyidae, in Oregon 2249

*Isfahan virus*, in *Phlebotomus papatasi*, in

## Turkmenia 3307

**Isobenzan** (1,3,4,5,6,7,8-octachloro-

## 1,3,3a,4,7,7a-hexahydro-4,7-

## methanoisobenzofuran)

## against

*Psoroptes cuniculi* 2487*P. ovis* 2487**Isobutyric acid** (see Propanoic acid, 2-

## methyl-)

**Isodrin** ((1 $\alpha$ ,4 $\alpha$ ,4a $\beta$ ,5 $\beta$ ,8 $\beta$ ,8a $\beta$ )-

## 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-

## hexahydro-1,4:5,8-dimethanonaphthalene)

## against

*Psoroptes cuniculi* 2487*P. ovis* 2487**Isogenus**, in rivers, as indicators of effects of

## insecticides 1292

**L-Isoleucine**in *Aedes togoi*, utilisation by *Brugia pateri*

## of 68

in *Anopheles atroparvus*, utilisation by*Brugia pateri* of 68in *Anopheles stephensi*, effects of*Plasmodium berghei* on 1199**Isomalathion** (see Butanedioic acid,

## [[methoxy(methylthio)phosphinyl]thio]-

## diethyl ester)

**Isomerase, glucose phosphate**in *Aedes togoi*, genetics of 3274

## in Phlebotominae, use as taxonomic

## character of 2967

## isoenzymes

in *Culex ocella* 2923in *Culex panocossa* 2923in *Hyalomma*, use in taxonomy of 934in *Triatoma infestans* 41**Isomerism**, in, Simuliidae, in Guatemala

## 144

**Isomerism lairdi**

## development in 145

in, *Simulium* spp., in Ivory Coast 145

## sex ratio in 145

## WHO data sheet 434

**Isonepetic acid** (see 4-Piperidinecarboxylic

## acid)

**Isodon macrourus***Echinonema cinctum* in 692*Schoengastia bicoxalae* on, in Papua New

## Guinea 3426

**Isoperla**, in rivers, as indicators of effects of

## insecticides 1292

**Isopimpinellin** (see 7H-Furo[3,2-

## g][1]benzopyran-7-one, 4,9-dimethoxy-)

**Isopoda**, on *Ecklonia*, development of 2439**Isoptera**, in Bermuda, book 792**Isospora**, in, dog dung, in England 220**3(2H)-Isothiazolone, 5-(aminomethyl)-**, in*Periplaneta americana*, effects on central

## neurons of 2842

**Isovaleric acid** (see Butanoic acid, 3-methyl-)



## Subject Index

- Isoxanthopterin** (see 4,7(1*H*,8*H*)-Pteridinedione, 2-amino-)
- 3(2*H*)-Isoxazolone, 5-(aminomethyl)-**, in *Periplaneta americana*, effects on central neurons of 2842
- 3(2*H*)-Isoxazolone, 5-(aminomethyl)dihydro-**, in *Periplaneta americana*, effects on central neurons of 2842
- Israel**
- Cheyletus tenuipilis* in, in house dust 300
- Demodex aurati* in, on golden hamster 282
- D. criceti* in, on golden hamster 282
- Ornithonyssus sylviarum* in, on poultry 290
- Scorpiones in 1981
- Italy**
- Aedes detritus* in, natural enemies of 2937
- Anopheles labranchiae* in 2128
- A. sacharovi* in 2128
- A. superpictus* in 770
- Cephenemyia stimulator* in, on *Capreolus* 10
- Cheyletiella yasguri* in, on dog 12
- Culex pipiens* in 772
- Haemaphysalis concinna* in 11
- Ixodidae* in 3062
- Ixodoidea* in 3064
- malaria in 2128
- Musca domestica* in 657, 773
- Pediculus capitis* in, on man 768, 2014, 2570
- Phlebotominae in 2967
- in animal housing 764
- Psychodidae in 896
- Rhipicephalus sanguineus* in, on dog 3063
- Sciomyzidae in 9
- Simuliidae in 2392
- Siphonaptera in 2029
- Tabanus darimonti* in 3368
- Itaqui virus**, in, *Culex quinquefasciatus*, infectivity of 1524
- Itching** (see Pruritus)
- ivashentzovi, Simulium equinum**
- ivashentzovi, Wilhelmsia equina** (see *Simulium equinum ivashentzovi*)
- Ivermectin**, against, *Musca autumnalis*, in cattle dung 2433
- Ivory Coast**
- Glossina* spp. in 150, 1697, 2983, 2989, 2990, 2991, 2993
- natural enemies of 3320
- G. nigrofusca* in 2992
- G. pallicera* in 2992
- G. palpalis* in 1872, 2986, 2987
- G. tachinoides* in 2986, 2987, 2988
- Haemolaelaps* spp. in 3422
- Simulium* spp. in 641, 1704, 2676, 2677, 2975
- natural enemies of 145, 429
- S. damnosum* in 1691
- S. sanctipauli* in 433, 2678
- natural enemies of 1849
- S. soubrense* in 433, 2678
- natural enemies of 1849
- sleeping sickness in 1872
- Ixodes**
- attachment in, stimuli for 1405
- Babesia* spp. in, transmission of 3137
- Congo virus in, transmission of 1945
- in Indonesia 925
- in Italy 3064
- Powassan virus in, transmission of 3137
- Russian spring-summer encephalitis, virus in, transmission of 3137
- tick-borne encephalitis, virus in, transmission of 1946
- Ixodes angustus***
- in USA 2302
- on *Didelphis virginiana*, in Oregon 2302
- Ixodes apronophorus***
- in USSR 3083
- on Rodentia, in Siberia 3083
- Ixodes arboricola***
- in German Federal Republic 956
- on birds, in German Federal Republic 956
- Ixodes calcarhebes***
- sp. nov., description of 249
- in Zambia 249
- on *Praomys natalensis*, in Zambia 249
- Ixodes cavipalpus***
- in South Africa 1645
- on cattle, in South Africa 1645
- Ixodes cookei***
- in USA 1398, 1408, 2465
- on domestic animals, in Connecticut 1398
- on man, in Connecticut 1398
- on wildlife, in Oklahoma 2465
- Ixodes dammini***
- Babesia microti* in
- in Massachusetts 1651
- transmission of 3397
- in USA 248, 269, 1398, 1408, 1651
- Lyme arthritis and 269
- on dog, in Connecticut 1398
- on man
- in Connecticut 1398
- in USA 269
- on *Odocoileus virginianus*, in Connecticut 248
- on *Peromyscus leucopus*
- in Connecticut 248
- in Massachusetts 1651
- on *Tamias striatus*, in Connecticut 248
- seasonal abundance of 248
- Ixodes dentatus***
- Connecticut virus in, in Connecticut 1408
- in USA 1155, 1408, 2465, 3145
- on *Sylvilagus floridanus*
- in Connecticut 1408
- in Indiana 3145
- in USA 1155
- on wildlife, in Oklahoma 2465
- Ixodes donarthuri***
- sp. nov., description of 1404
- in Mozambique 1404
- on *Redunca arundinum*, in Mozambique 1404
- on *Sylvicapra grimmia*, in Mozambique 1404
- Ixodes festai***
- in German Federal Republic 956
- on birds, in German Federal Republic 956
- Ixodes galapagoensis***
- sp. nov., description of 1949
- in Galapagos Islands 1949
- on *Oryzomys bauri*, in Galapagos Islands 1949
- Ixodes hexagonus***
- in Italy 3064
- on cat, in Italy 3064
- Ixodes holocyclus***
- control of 258
- humidity preferences in 2473
- in Australia 258
- on cattle, in Queensland 258
- Queensland tick typhus, causal agent in, transmission of 3137
- temperature preferences in 2473
- Ixodes laguri***
- in Czechoslovakia 239
- in *Citellus citellus* nests, development of 239
- Ixodes lividus***
- in USSR 3083
- in *Riparia riparia* nests, in Siberia 3083
- Ixodes marxi***
- in Canada 720
- on *Sorex cinereus*, in Canada 720
- Ixodes minor***
- in USA 2001
- on *Colinus virginianus*, in USA 2001
- Ixodes muris***
- in Canada 720
- on *Clethrionomys gapperi*, in Canada 720
- Ixodes pacificus***
- Babesia microti* in, transmission of 242
- in USA 269, 1650, 3081
- Lyme arthritis and 269
- on *Reithrodontomys megalotis*, paralysis caused by 1650
- Spiroplasmataceae in, in Oregon 3081
- Ixodes pari***
- in German Federal Republic 956
- on birds, in German Federal Republic 956
- Ixodes persulcatus***
- activation of
- effects of diapause on 2731
- Ixodes persulcatus* contd.**
- activation of *contd.*
- effects of temperature on 2731
- aggregation pheromone in 721
- body size in 708
- control of
- acaricides for 716, 977
- growth regulators for 254
- recovery from 1035, 1036
- embryonic development in, effects of humidity on 717
- human activity as affecting 3411
- in USSR 493, 708, 716, 977, 1035, 1036, 1044, 1688, 1934, 2734, 3083, 3389, 3399, 3411
- in Yugoslavia 701
- neurosecretory system in
- effects of delayed insemination on 978
- effects of feeding on 722
- olfactory sensilla in 3409
- on *Apodemus*, effects on oxygen consumption of 1066
- on *Apodemus sylvaticus*, no resistance to 1039
- on *Clethrionomys rutilus*, encounter rates of 1044
- on *Microtus arvalis*, no resistance to 1039
- on Rodentia
- in Maritime Territory 3389
- in Siberia 3083
- oviposition in, effects of humidity on 717
- physiological age of, seasonal changes in 1934
- population dynamics of 1035, 1036
- model 2735
- population spatial structure in 977
- seasonal abundance of 1934
- surveillance for 493
- tick-borne encephalitis virus in
- in Kirgizia 1688
- infectivity of 2732
- transmission of 716, 1946, 2733
- Ixodes pomerantzevi***, on *Apodemus*, effects on oxygen consumption of 1066
- Ixodes redikorzevi***
- in USSR 1060
- on *Mus musculus*, in Crimea 1060
- Ixodes ricinus***
- aggregation pheromone in 721
- Babesia divergens* in
- in UK 3398
- transmission of 277, 946, 1635, 2212
- Bhanja virus in, transmission of 2233
- biology of 233
- control of
- acaricides for 253, 1639, 3048
- growth regulators for 254
- immunization for 3390
- repellents for 928
- timing of 1639
- Coxiella burnetii* in, in Lithuania 3399
- Cytoecetes phagocytophila* in, in ovaries 1396
- development in 924
- Ehrlichia phagocytophila* in, transmission of 946
- habitats of 3062, 3398
- in Czechoslovakia 924, 1639, 3069
- in France 2743, 3392
- in German Democratic Republic 1721
- in German Federal Republic 233, 956, 3391
- in Iran 2750
- in Irish Republic 1635
- in Italy 2233, 3062, 3064
- in Poland 323
- in Spain 1117, 2233
- in UK 946, 2212, 3048, 3086, 3398
- in USSR 253, 1071, 3399
- in Yugoslavia 237, 701
- louping ill, virus in, infectivity of 712
- mapping of, with vegetation maps 2743
- on *Apodemus*, effects on oxygen consumption of 1066
- on bat, in Uzbekistan 1071
- on birds, in German Federal Republic 956
- on cat, in Italy 3064
- on cattle
- in Irish Republic 1635
- in Northern Ireland 946, 2212

- Ixodes ricinus* contd.**  
 on cattle contd.  
   in USSR 253  
 on *Cervus elaphus*, in Spain 1117  
 on *Clethrionomys glareolus*, in France 3392  
 on deer, in German Democratic Republic 1721  
 on *Mustela*, in Poland 323  
 on sheep, in UK 3048  
 parasitised by, *Hunterellus hookeri*, in German Federal Republic 3391  
 population spatial structure in 977  
*Rickettsia slovaca* in, in Lithuania 3399  
 seasonal abundance of 1635, 3086  
 spotted-fever rickettsiae in, sexual transmission of 2741  
 tick-borne encephalitis virus in  
   in Czechoslovakia 3069  
   strains of 3069  
   transmission of 233, 1946, 2233, 2733, 3137  
 Uukuniemi virus in, transmission of 2233
- Ixodes scapularis***  
*Babesia microti*, in, transmission of 242  
 in USA 2465  
 on wildlife, in Oklahoma 2465
- Ixodes signatus***, arboviruses in, transmission of 1947
- Ixodes texanus***  
 in USA 2465  
 on wildlife, in Oklahoma 2465
- Ixodes trianguliceps***  
*Babesia microti* in, transmission of 971  
 biology of 2736  
 DDT not affecting populations of 977  
 engorgement in, effects of delayed mating on 274  
 fecundity in, effects of delayed mating on 274  
 in UK 971  
 in USSR 977, 1046, 2736, 3083  
 on Rodentia, in Siberia 3083  
 on small mammals  
   in England 971  
   in Ukraine 2736  
 population spatial structure in 977  
 seasonal abundance of 971
- Ixodes uriae***  
 arboviruses in  
   in Norway 702  
   transmission of 1947  
 in Norway 702  
 in USSR 702  
 on sea birds, in Norway 702
- Ixodes vespertilionis***  
 in USSR 1071  
 on bat, in Uzbekistan 1071
- Ixodes woodi***  
 in USA 495, 2465  
 on *Neotoma floridana*, in Oklahoma 495  
 on wildlife, in Oklahoma 2465
- Ixodidae**  
 acaricide resistance in, in USSR 928  
 anatomy of, book 719  
 as elements of biocoenoses 1047  
 bacteria in, in Kirghizia 1033  
*Brucella* spp. in, transmission of 3413  
 cell cultures from, review 1469  
 control of 711  
 hosts of, immunological interactions with 1022  
 in Afghanistan 695  
 in Malagasy Republic 3060  
 in Spain 243  
 in Tadzhikistan 1072  
 in Turkmenia 1636  
 in Turkmenistan, book 2747  
 in Virginia 711  
 in Xinjiang-Uighur 973  
 on birds, in Kirghizia 1033  
 on cattle, in Karnataka 1401  
 on livestock in Egypt 2752  
 on Rodentia, in Maritime Territory 3389  
 on small mammals, in Maritime Territory 491  
 on wildlife, in Oklahoma 2465  
 preyed on by, *Buphagus erythrorhynchus*, in South Africa 1643  
 salivary glands in, functions of, review 953
- Ixodidae contd.**  
 taxonomy of, larval characters in 925  
 tick-borne encephalitis, virus in, transmission of 3413  
 water relations in 926
- Ixodides**, on small mammals, in Czechoslovakia 933
- Ixodoidea**  
 acaricide resistance in 2286  
 animal diseases transmitted by 779  
*Babesia* spp. in, transmission of 3396  
 control of 1701, 2525  
 acaricides for 320, 1888, 2820  
 development in, relation of host development and 957  
 diseases transmitted by 924  
   in Benelux countries, bibliography 2751  
   in modern society, review 3137  
 in Benelux countries, bibliography 2751  
 in Ethiopia, book 951  
 in Morocco 3403  
 in Nigeria 2003  
 in Philippines 2804  
 in Thailand 2809  
 mapping of, with vegetation maps 2743  
 on cattle  
   immunity to, review 952  
   in developing countries 714  
   in Europe 1948  
   in India 2837  
   in Timor 2820  
   in tropics 1649  
   in Wyoming 2525  
   in Zimbabwe 937  
   resistance to 16  
 on game animals  
   in Africa, bibliography 13  
   in South Africa 1888  
 on livestock, in Australia 18, 19, 2831  
 on man, disease transmission by 2316  
 on sheep  
   in Europe 1948  
   role in back-rolling of 320  
 on small mammals, in Scandinavia 2338  
 on *Sylvilagus floridanus*  
   in Indiana 3145  
   in USA 1155  
 pathogens in, modes of transmission of 1091  
 resistance to, bibliography 979  
 serial mounting of sections of 2514  
 taxonomy of, in India 705
- Ixodorhynchidae**, chaetotaxy of 921
- Ixoreus naevius***, *Ceratophyllus diffinis* on, in Alaska 1187
- iyensis***, *Tabanus*
- Jacutin** (see Lindane, with phenylmethyl benzoate)
- jalorensis***, *Radfordia ensifera*
- Jamaica**  
*Aedes taeniorhynchus* in, viruses in 845  
*Amblyomma cajennense* in  
   on donkey 2463  
   on man 2463  
   viruses in 845  
*Anocentor nitens* in, on donkey 2463  
*Anopheles grabhamii* in, viruses in 845  
*Boophilus microplus* in, on cattle 2463  
*Culex nigripalpus* in, viruses in 845  
*Rhipicephalus sanguineus* in, on dog 2463
- jamesbeeri***, *Geomydoecus*
- janalis***, *Laelaps*
- Japan**  
*Aedes daitensis* in, on man 2947  
*A. flavopictus* in, natural enemies of 588  
*Alphitobius diaperinus* in, in fowl housing 2204  
*Anopheles sinensis* in 2907  
*Cheyletiella* spp. in  
   on cat 983  
   on man 983  
*C. blakei* in, on cat 288  
*C. parasitivorax* in, on rabbit 288  
 Chironomidae in, in rice-fields 1624  
*Culex* spp. in 111  
*C. molestus* in 2050  
*C. pipiens* in 2907, 2908  
*C. quinquefasciatus* in 2050  
*C. tritaeniorhynchus* in 2907  
   in rice-fields 99, 1226  
   viruses in 3286
- Japan contd.**  
 Culicidae in 603, 1217, 3271  
 Dermoglyphidae in, on budgerigar 288  
 Diptera in, bacteria in 880  
*Haemaphysalis flava* in, natural enemies of 3085  
*H. longicornis* in, natural enemies of 3085  
*Haematobia irritans* in, on cattle 470  
*Hybomitra tsushimaensis* in 3022  
 mites in, in house dust 727  
 Muscidae in, on cattle 1379  
*Orthohalarachne diminuta* in, on zoo sea lion 1423  
*Paraperiglischrus* spp. in, on bats 505  
*Prosimulium karibaense* in, on man 1583  
*Protoetia fusca* in, in goat dung 3382  
*Scathophaga* spp. in, in dung 3023  
 Sepsidae in 2419  
 Simuliidae in 2665  
*Tabanus* spp. in 1373  
 Trombiculidae in 2230  
*Tyrophagus putrescentiae* in, on budgerigar 288
- Japanese encephalitis** (see Encephalitis, Japanese)
- japonica***, *Haemaphysalis*
- japonica***, *Neotrombicula*
- japonica***, *Periplaneta*
- japonicus***, *Aedes*
- Jars**, *Aedes aegypti* in, in West Malaysia 1800
- Javanisca indosinica***, sp. nov., description of 3337
- jenningsi***, *Simulium*
- Jerboa**, Severtzov's (see *Allactaga severtzovi*)
- jettmari***, *Laelaps*
- jeyporiensis***, *Anopheles*
- JH-I** (see 2,6-Nonadienoic acid, 7-ethyl-9-(3-ethyl-3-methyloxiranyl)-3-methyl-, methyl ester)
- JH-II** (see 2,6-Nonadienoic acid, 9-(3-ethyl-3-methyloxiranyl)-3,7-dimethyl-, methyl ester)
- JH-III** (see 2,6-Nonadienoic acid, 9-(3,3-dimethyloxiranyl)-3,7-dimethyl-, methyl ester)
- jiangxiensis***, *Walchia*
- Jird**, Libyan (see *Meriones libycus*)
- Jodfenphos** (see Iodofenphos)
- johannseni***, *Simulium*
- johnhafneri***, *Geomydoecus*
- johni***, *Culex*
- Jordan**, *Ctenocephalides felis* in, on cat 365
- jubifer***, *Culex*
- judaicus***, *Buthotus*
- julianoi***, *Trichogramma*
- juppi***, *Aedes*
- Juvenile hormone I (C<sub>19</sub>)** (see 2,6-Nonadienoic acid, 7-ethyl-9-(3-ethyl-3-methyloxiranyl)-3-methyl-, methyl ester)
- Juvenile hormone II (C<sub>17</sub>)** (see 2,6-Nonadienoic acid, 9-(3-ethyl-3-methyloxiranyl)-3,7-dimethyl-, methyl ester)
- Juvenile hormone III (C<sub>16</sub>)** (see 2,6-Nonadienoic acid, 9-(3,3-dimethyloxiranyl)-3,7-dimethyl-, methyl ester)
- Juvenile hormones**  
*Aedes aegypti* 2062  
*Leucophaea maderae* 1732  
*Periplaneta americana* 2009, 2844  
*Sarcophaga crassipalpis* 1611  
 regulation of, review 3134  
 review 3150
- K-Othrin** (see Cyclopropanecarboxylic acid, 3-(2,2-dibromoethenyl)-2,2-dimethyl-, cyano(3-phenoxyphenyl)methyl ester, [1R-[1 $\alpha$ (S\*),3 $\alpha$ ]]-)
- Kadethrin** (see Cyclopropanecarboxylic acid, 3-[(dihydro-2-oxo-3(2H)-thienylidene)methyl]-2,2-dimethyl-, [5-(phenylmethyl)-3-furanyl]methyl ester, [1R-[1 $\alpha$ ,3 $\alpha$ (E)]]-)
- Kala-azar** (see Leishmaniasis, visceral)
- Kallikrein**, in rat salivary glands, *Tityus serrulatus* venom stimulating secretion of 2780
- kanthaticus***, *Melophagus*
- kanhaensis***, *Schoengastia*



- Kansas, *Haematobia irritans* in, on cattle** 2422
- kansuensis, *Haematopota karibaensis*, *Prosimulium kashmirensis*, *Haemaphysalis kauli*, *Sergentomyia kawamurai*, *Leptotrombidium Kayella anatica***  
in Bulgaria 1664  
on small mammals, in Bulgaria 1664
- kazakhstanica, *Bemix kazbegiensis*, *Callopsylla kazeruni*, *Phlebotomus kazirangensis*, *Drepanocerus keeni*, *Opisodasya kelleyi*, *Ornithodoros Kemerovo* viruses, in, *Ixodes uriae*, in Norway 702**
- Kentucky**  
*Dermanyssus americanus* in, on man 1670  
*Haematobia irritans* in, on cattle 2430  
*Musca autumnalis* in, on cattle 2430
- Kenya**  
*Aedes aegypti* in 2365  
*A. lineatopennis* in, viruses in 1551  
*Amblyomma variegatum* in, viruses in 1641  
*Anopheles* spp. in, in rice-fields 854  
*A. coustani* in, viruses in 1551  
Astigmata in, on *Erinaceus* 2239  
*Calcarmyobia rhinolophia* in, on *Rhinolophus* 301  
Culicidae in 97  
in *Pandanus* axils 54  
in tree holes 2876  
*Culicoides* spp. in, viruses in 1551  
*Glossina* spp. in 1877  
*G. fuscipes* in 1332  
*G. pallidipes* in 651, 1313, 1332, 2685, 3000, 3002  
flagellates in 1312  
in conifer plantations 3321  
trypanosomes in 1085  
Ixodoidea in 951  
medical entomology in 15  
Phlebotominae in  
flagellates in 2972  
on lizard 2972  
*Phlebotomus martini* in 1086  
*P. pedifer* in 1086  
*Rhipicephalus* spp. in, viruses in 1641  
*R. appendiculatus* in, sporozoites in 3089  
Scarabaeidae in, in dung 917  
veterinary entomology in 15, 1722  
*Xenopsylla* spp. in, on *Tatera* 1513
- Keratella**, eaten by *Simulium* larvae 1037
- Keratitis**, in guinea-pig, caused by *Trixacarus caviae* 510
- Kermadec Islands** (indexed under New Zealand Island Territories)
- Kerteszia**, in Brazil 1202
- kesseli, *Aedes***
- Keys**  
Aculeata, in British Isles 691  
*Adlerius* 869  
*Aedes scutellaris* group, in Fiji, Samoa and Tonga 1236  
*Aedius* 2903  
*Afrolabidocarpus* 2484  
*Amphipsylla*, in Himalayas 3186  
*Anoediopora* 2903  
Anomiopsyllinae 1750  
*Anopheles hyrcanus* group 2067  
Argasidae, in Spain 243  
Atopomelidae, in Neotropical region 286  
*Austroglycyphagus* 1000  
Blattaria, in Quebec 551  
Bombyliidae, in Arabian Peninsula 2532  
*Boophilus* 2476  
Buthidae, in Zimbabwe 1428  
Calliphoridae  
in New Caledonia 3339  
in Thailand 662  
*Cheyletus* 506  
in Afrotropical region 733  
*Chrysops*, in Argentina 1476  
*Culex*, in Angola 2638  
Culicidae, in Canada 1533  
*Culicoides*, in Florida 131  
*Culicoidini*, in Australia 863  
*Dasyphora*, in Norway 881  
Diptera, in Nearctic region 2587
- Keys contd.**  
*Dirhinus* spp., in Indian subregion 3056  
*Eadie* 2236  
entomogenous nematodes 1134  
*Eudasyphora* 683  
*Geomydoecus*, on *Geomys* 33  
*G. californicus* complex 3164  
*G. minor* complex 1171  
*G. neocoepei* complex 1492  
*G. oregonus* complex 31  
*Guntheria*, in Papua New Guinea 1968  
*Haemolaelaps ulysses* group 3103  
Hippoboscidae, in Kazakhstan 681  
*Hoplopleura*, in Argentina 1475  
insects, reference guide 538  
Ixodidae  
in Spain 243  
in Virginia 711  
Ixodoidea  
in India 705  
in Malagasy Republic 3060  
*Laminosioptes* 3423  
*Leptotrombidium* species groups 2245  
*Lucilia*, in Norway 2408  
*Macrocheles*, in New Zealand region 3092  
Meloinae, in India 227  
Mesostigmata, in British Isles 302  
*Ornithogastia*, in Papua New Guinea 1968  
Parasitinae, in British Isles 1960  
*Periplaneta* nymphs 554  
Phlebotominae  
in Portugal 1843  
in Saudi Arabia 2530  
in Venezuela 419  
Phlebotomine genera, in New World 2661  
Phthiraptera, in Afrotropical region 1177  
*Physconelloides*, on Columbinae 2566  
*Psorergatoides* 736  
*Raillietia* 3102  
*Rattimyobia* 2483  
Rhodacaridae, in USSR 1006  
*Schoengastia*, in Asiatic-Pacific region 513  
Scorpiones, in Mexico 1676  
Scutoverticidae 994  
Sepsidae, in Japan 2419  
*Shunsennia* 3095  
Simuliidae, in Italy 2392  
*Simulium*, in Philippines 2813  
*S. damnosum* complex 143  
*Stegomyia*, in Oriental region 575  
*Strandius*, in India 1629  
Tabanidae  
in Benelux countries 449  
in California 2444  
*Tabanus bifarius* group 3340  
*T. iyoensis* group 1373  
*Tinolestes* 2903  
*Tityus trivittatus* subspecies 2496  
Triatominae, in Bolivia 1474  
*Trox*, in Saudi Arabia 2528  
Vespinae, in British Isles 484  
*Wilhelmia*, in England 2670
- kibunensis, *Culicoides***
- Kieselguhr**, against, *Nosopsyllus fasciatus* 2578
- kiiensis, *Chironomus kikuyuensis*, *Microtrembicula***
- Kinase (phosphorylating), ethanolamine**, in *Culex quinquefasciatus*, characterization of 2625
- Kinase (phosphorylating), hexo-**  
in *Periplaneta americana* nervous system, not inhibited by DDT 552  
in Phlebotominae, use as taxonomic character of 2967  
isoenzymes, in *Culex pipiens* group 2035
- Kinase (phosphorylating), inosine**, in *Anopheles albimanus* 1213
- kingi, *Culicoides***
- kingstoni, *Onthophagus***
- Kininogenin** (see Kallikrein)
- Kinkajou** (see *Potos flavus*)
- Kinoprene** (2-propynyl (2E,4E)-3,7,11-trimethyl-2,4-dodecadienoate)  
against, *Culex pipiens* 1754  
in *Culex pipiens*, effects of 1754
- kirovabadicus, *Culicoides*** (see *C. circumscriptus*)
- Kisemayo virus**  
characterization of 251  
in, *Rhipicephalus pulchellus*, in Somalia 251
- Kitazin** (see Phosphorothioic acid, *O,O*-dimethyl *S*-(phenylmethyl) ester)
- Kitazin-P** (see Phosphorothioic acid, *O,O*-bis(1-methylethyl) *S*-(phenylmethyl) ester)
- Kitchens, *Periplaneta americana*** in, in Punjab 793
- klossi, *Aviostivalius (Stivalius)***
- klossi, *Stivalius*** (see *Aviostivalius klossi*)
- Knemidokoptes mutans***  
in Indonesia 2806  
in Nigeria 1493  
in Spain 3419  
on *Alectoris rufa*, in Spain 3419  
on fowl  
in Indonesia 2806  
in Nigeria 1493  
on guineafowl, in Nigeria 1493
- Knemidokoptes pilae***  
control of, acaricides for 1663  
in Australia 1663  
on budgerigar, in Queensland 1663
- Knox Out** (see Diazinon)
- Kobus leche*, *Strobiloestrus vanzyli*** on, in Zambia 1338
- koenigii, *Dysdercus***
- koliensis, *Anopheles konoi*, *Lardoglyphus kopetdaghica*, *Haemaphysalis koreicus*, *Aedes kotoshoensis*, *Tabanus krikkeni*, *Caccobius kualalumpurensis*, *Austroglycyphagus kuehniella*, *Ephestia kulkarnii*, *Amphipsylla kulumadovens*, *Whartonia kumari*, *Hyalomma Kunjin* virus**  
in  
*Aedes albopictus*, inhibiting development 844  
Culicidae, transovarial transmission of 844
- kurentzovi, *Telenomus kutchensis*, *Haemaphysalis***
- Kwell** (see Lindane)
- Kyasanur Forest disease**, virus, tick transmission of 3137
- Kynurenine** (see Benzenebutanoic acid,  $\alpha$ ,2-diamino- $\gamma$ -oxo-)
- L-27** (see Propanamide, *N*-[2-amino-3-nitro-5-(trifluoromethyl)phenyl]-2,2,3,3-tetrafluoro-)
- La Crosse virus**  
in  
*Aedes triseriatus*  
effects on feeding of 577  
in Indiana 2900  
transmission of, molecular basis of 2630
- Labiatae**, insecticidal activity of mucilaginous seeds of 2601
- labranchiae, *Anopheles***
- Laccase** (see Oxygenase, monophenol mono-)
- Lactalbumin hydrolysate**, culture-medium component for, *Trypanosoma brucei* 149
- Lactic acid** (see Propanoic acid, 2-hydroxy-)
- lactis*, *Carpoglyphus lacustris*, *Gerris***
- Laelapinae**  
on Marsupialia, in Western Australia 1653  
on Muridae, in Western Australia 1653
- Laelaps**  
on *Bandicota bengalensis*, in Burma 2478  
on *Rattus*, in Burma 1962  
on *Suncus murinus*, in Burma 2775
- Laelaps agilis***  
in Bulgaria 1659  
in Czechoslovakia 933  
in Hungary 2244  
on small mammals  
in Bulgaria 1659  
in Czechoslovakia 933  
seasonal abundance of 1659

- Laelaps algericus**  
in Bulgaria 1659  
in USSR 1060  
on *Mus musculus*, in Crimea 1060  
on small mammals, in Bulgaria 1659  
seasonal abundance of 1659
- Laelaps angiodis**  
sp. nov., description of 1653  
in Australia 1653  
on *Zyzomys woodwardi*, in Western Australia 1653
- Laelaps bycalia**  
sp. nov., description of 508  
in Australia 508  
on *Pseudomys albocinerus*, in Western Australia 508
- Laelaps calvescens**  
sp. nov., description of 1416  
in Papua New Guinea 1416  
on *Pogonomys macrourus*, in New Guinea 1416
- Laelaps clethrionomydis**  
in USSR 1046, 3389  
on Rodentia, in Maritime Territory 3389
- Laelaps echidnina**  
in Burma 1962, 2478  
on *Bandicota bengalensis*, in Burma 2478  
on *Rattus*, in Burma 1962  
seasonal abundance of 2478
- Laelaps elegans**  
sp. nov., description of 1653  
in Australia 1653  
on *Pseudomys*, in Western Australia 1653
- Laelaps hilaris**  
in Czechoslovakia 2232  
in Poland 323  
on *Microtus arvalis*, in Czechoslovakia 2232  
on *Mustela*, in Poland 323
- Laelaps janalis**  
sp. nov., description of 508  
in Australia 508  
on *Pseudomys occidentalis*, in Western Australia 508
- Laelaps jettmari**  
in USSR 1060  
on *Mus musculus*, in Crimea 1060
- Laelaps lybacia**  
sp. nov., description of 508  
in Australia 508  
on *Pseudomys praeconis*, in Western Australia 508
- Laelaps myonyssognathus**  
in Burma 1962, 2478, 2775  
on *Bandicota bengalensis*, in Burma 2478  
on *Rattus*, in Burma 1962  
on *Suncus murinus*, in Burma 2775  
seasonal abundance of 2478
- Laelaps nuttalli**  
in Burma 1962, 2478  
on *Bandicota bengalensis*, in Burma 2478  
on *Rattus*, in Burma 1962  
seasonal abundance of 2478  
taxonomy of, *Laelaps elegans* misidentified as, in Western Australia 1653
- Laelaps parameces**  
sp. nov., description of 1653  
in Australia 1653  
on *Conilurus penicillatus*, in Western Australia 1653
- Laelaps pavlovskiy**  
in USSR 3389  
on Rodentia, in Maritime Territory 3389
- Laelaps sarcimen**  
sp. nov., description of 1416  
in Papua New Guinea 1416  
on *Pogonomys macrourus*, in New Guinea 1416
- Laelaps synnomus**  
sp. nov., description of 1653  
in Australia 1653  
on *Zyzomys argurus*, in Western Australia 1653
- Laelaps wittei**  
in Burma 1962  
on *Rattus*, in Burma 1962
- laeta, Loxosceles laetitinctus, Tabanus**
- laeviceps, Ceratophyllus** (see *Nosopsyllus laeviceps*)
- laeviceps, Nosopsyllus** (*Ceratophyllus*)
- laevigatus, Scheloribates**
- laeviusculus, Neohaematopinus**
- Lagomorpha**  
*Eutrombicula batatas* on, in Arizona 982  
Trombiculidae on, in Indiana 1966
- Lagoons, Anopheles subpictus** in, in Indonesia 1777
- laguri, Ixodes**
- Lagurus lagurus**, Siphonaptera on, removal by host of 2342
- lahillei, Simulium**
- lahorensis, Alveonanus** (see *Ornithodoros lahorensis*)
- lahorensis, Ornithodoros** (*Alveonanus*)
- Lakes**  
diflubenzuron in, residues of 2109  
*Procladius* spp. in, in Poland 1917  
Simuliidae in, in Italy 2392
- Lakes, recreational, Chironomidae** in, in USA 912
- Lakes, reservoir**  
*Aedes* spp. in, in Tuva ASSR 2588  
*Culicoides* spp. in, in USSR 2647  
Tabanidae as affected by construction of 2694  
Tabanidae in, in Uzbekistan 1070
- Lambornella clarki**, WHO data sheet on 2360
- Lambornella stegomyiae**, WHO data sheet on 2360
- lamella, Gahrlepiea**
- Laminosioptes**  
on birds, in Antwerp Zoo 3423  
taxonomy of 3423
- Laminosioptes cysticola**, descriptions of 3423
- lancangjiangensis, Haematopota**
- lancifer, Mimogaurax** (*Pseudogaurax*)
- lancifer, Pseudogaurax** (see *Mimogaurax lancifer*)
- Lankestria culicis** (see *Ascocystis culicis*)
- Lanthanum**  
in *Amblyomma variegatum*, penetration into nervous system of 1944  
marker for, *Glossina* spp. 2681
- Laos**  
*Anopheles balabacensis* in 2127  
malaria in 2127
- laptevi, Caenopsylla**
- Lardoglyphus konoi**  
aggregation pheromone in 3424  
alarm pheromone in 1652
- Larus cirrocephalus, Ornithodoros capensis**  
in nests of, in West Africa 704
- Lasiohelea** (see *Forcipomyia*)
- lasiophthalmia, Hybomitra**
- Lasioseius mcgregori**  
in Bulgaria 1659  
on small mammals, in Bulgaria 1659
- lateralis, Cercyon**
- Latilamellobates incisellus** (see *Ceratozetes incisellus*)
- latinum, Simulium**
- latipes, Cnetha** (see *Simulium latipes*)
- latipes, Eusimulium** (see *Simulium latipes*)
- latipes, Scheloribates**
- latipes, Simulium** (*Cnetha*; *Eusimulium*)
- latiscutata, Gahrlepiea**
- latiscutatus, Hirstionyssus** (see *H. butantanensis*)
- latizonum, Simulium**
- Latoia vivida**  
in South Africa 485  
on man, urticaria caused by 485  
toxin in 485
- Latrodectus antheratus**, venom of 3115
- Latrodectus dahl**  
biology of 2778  
in USSR 2778
- Latrodectus geometricus**, in Puerto Rico 3429
- Latrodectus hesperus**  
courtship in 303  
predators of, defence mechanisms against 2493  
sex pheromone of 303
- Latrodectus mactans**  
in Puerto Rico 3429  
on man, bite by, treatment of 3113
- Latrodectus mactans contd.**  
parasitised by  
*Desantisca* spp., in Puerto Rico 3429  
*Mimogaurax lancifer*, in Puerto Rico 3429  
reproductive potential in 3429  
sex pheromone of 303  
group of  
development in 1473  
in Argentina 1473
- Latrodectus mactans tredecimguttatus** (see *L. tredecimguttatus*)
- Latrodectus pallidus pavlovskii**  
biology of 2778  
in USSR 2778
- Latrodectus tredecimguttatus**  
biology of 2778  
in USSR 2778
- Latrodectus variolus**, in Puerto Rico 3429
- Latumcephalum**, on Marsupialia, in Western Australia 2565
- latus, Arrenurus**
- lawrensis, Lipeurus** (see *Numidilipeurus lawrensis*)
- lawrensis, Numidilipeurus** (*Lipeurus*)
- laxoscutum, Leptotrombidium**
- Learning**, in *Periplaneta americana* 797
- lebedewi, Ceratophyllus**
- Lecithins**  
diet component for, *Aedes aegypti* 2608  
unimolecular films of, against, *Anopheles* spp. 854
- Lectins**, to *Trypanosoma cruzi*, in *Rhodnius prolixus* 2295
- lectularius, Cimex**
- Legislation**, registration of microbial pesticides 1540
- Leguminosae**, insecticidal activity of mucilaginous seeds of 2601
- Leibovitz 15 medium**, culture-medium component for, *Boophilus microplus* cell lines 2226
- Leishmania**  
bibliography 1254, 1255  
control of  
reservoir control for 1576  
vector control for 420, 1576, 2536  
development of, in vectors 1084  
in  
dog, in Italy 764  
lizard, in Kenya 2972  
*Lutzomyia umbratilis*, in French Guiana 2969  
man  
in French Guiana 2969  
in Spain 3308  
Phlebotominae, transmission of 326  
*Phlebotomus* spp.  
in Kenya 2972  
in Kirgizia 1688  
*P. ariasi*, transmission of 2148  
*Proechimys cuvieri*, in French Guiana 1154  
*Sergentomyia* spp., in Kenya 2972  
*S. dentata*, in Kirgizia 1688  
life-cycle of 3308  
reservoirs of  
control of 1844  
in Middle East 420  
vectors of  
control of 1844  
host preferences of 2150  
in Middle East 420
- Leishmania donovani**  
clones of, variation in 867  
in  
dog, in France 132, 134  
man, lizard leishmaniasis providing partial immunization against 2972  
*Phlebotomus ariasi*, transmission of 132, 133, 134  
*P. caucasicus* 867
- Leishmania gymnodactyli**  
clones of, variation in 867  
in, *Phlebotomus papatasi* 867
- Leishmania major**  
clones of, variation in 867  
in  
*Phlebotomus duboscqi*, in Senegal 2147  
*P. papatasi* 867  
infectivity of, effects of host on 2146



- Leishmania tropica*, in, man, in Saudi Arabia 2535
- Leishmania tropica major* (see *L. major*)
- Leishmaniasis**  
aetiology of 3308  
bibliography 1254, 1255  
control of, in rural areas 326  
in French Guiana 1154  
in Greece 1576  
in Kenya 1086  
in Saudi Arabia 2530, 2535
- Leishmaniasis, visceral**  
in Bihar 1260, 1261  
in Sudan 634
- Leiurus quinquestriatus*  
telson extract from, effects on rat gut of 2497  
venom of 309
- Leiurus quinquestriatus quinquestriatus*, venom of, toxins in 742
- Lemma minor**  
Culicidae and predators as affected by 1243  
dominant in ponds without mosquito larvae 384  
repellent activity of extracts of 2618
- lemniscata, Epicauta*
- Lemongrass** (see *Cymbopogon citratus*)
- lemur, Onthophagus lenti, Triatoma**
- Leopard, snow** (see *Uncia uncia*)
- Lepidoglyphus destructor*, enzymes in, and in house dust 1964
- Lepidoptera**  
diapause in, review 1191  
in birds' nests, in UK 776  
on man, hypersensitivity to 319, 2828  
overwintering of, in birds' nests 2005  
zoology of 1719  
zoophilous 1632
- lepidum, Amblyomma**
- Lepislaga crassipes*  
autogeny in 2187  
in Brazil 2187  
*Mansonella ozzardi* in, not developing 1580  
on man, in Brazil 2187
- lepihora, Cuterebra*
- Lepomis macrochirus*  
diflubenzuron in, residues of 2109  
insect growth regulators in, residues of 3013
- leporina, Oestromyia**
- leporispalustris, Haemaphysalis**
- Leptinotarsa**, toxin in 232
- Leptinotarsa decemlineata*  
enzymes in 748  
insecticides in, acetylcholinesterase inhibition by 748
- Leptinotarsin, in Leptinotarsa** 232
- Leptinus americanus*  
in USA 3378  
on *Blarina brevicauda*, in West Virginia 3378  
seasonal abundance of 3378
- Leptocera acutangula*, in USSR 675
- Leptocera ferruginata*, in USSR 675
- Leptocera lugubris*, in USSR 675
- Leptocera vagans*, in USSR 675
- Leptoconops**, on sheep, in Idaho 3282
- Leptoconops foulki*  
in USA 415  
predators of, in California 415  
seasonal abundance of 415
- leptodactylus, Astacus**
- Leptomonas**  
in  
*Orchopeas howardii*  
attachment of 2866  
cysts of 2873  
*Palaeopsylla minor*  
attachment of 2866  
cysts of 2873
- Leptomonas ctenocephali**  
in  
*Ctenocephalides canis*  
attachment of 2866  
cysts of 2873
- Leptomonas pessoai**, in, *Phlebotomus caucasicus* 867
- Leptopsylla bidentata* (see *Peromyscopsylla bidentata*)
- Leptopsylla segnis*  
host preferences in 2333  
in USSR 1060  
mating in 2333  
on *Mus musculus*, in Crimea 1060  
on rodents, removal by host of 2342  
rearing of, techniques for 2333  
sessility in 2333
- Leptopsylla silvatica* (see *Peromyscopsylla silvatica*)
- Leptopsylla taschenbergi*  
in USSR 1060  
on *Mus musculus*, in Crimea 1060
- Leptotrombidium**  
habitats of 2811  
in Ryukyu Islands 2230  
in West Malaysia 2811
- Leptotrombidium akamushi* 2230
- Leptotrombidium allosectum*  
sp. nov., description of 2245  
in China 2245  
on *Apodemus agrarius*, in Fujian 2245
- Leptotrombidium arenicola*  
habitats of 2812  
in Indonesia 2810  
in Malaysia 725, 2810, 2812  
in oil-palm plantations, in West Malaysia 725  
on *Rattus argentiventer*, in Indonesia 2810  
on *Rattus rattus*, in Indonesia 2810  
on *Suncus murinus*, in Indonesia 2810  
*Rickettsia tsutsugamushi* in  
in Indonesia 2810  
transmission of 2812
- Leptotrombidium bengbuensis*  
sp. nov., description of 3098  
in China 3098  
on *Rattus norvegicus*, in Anhui 3098
- Leptotrombidium deliense*  
biology of 297  
control of 299  
habitats of 2812  
in India 3090  
in Indonesia 1961, 1963  
in Japan 2230  
in Malaysia 725, 1973, 1974, 2812  
in oil-palm plantations, in West Malaysia 725, 1973  
on *Rattus argentiventer*, in Indonesia 1963  
on *Rattus exulans*, in Irian Jaya 1961  
on *Rattus rattus*, in Irian Jaya 1961  
on *Rattus ruber*, in Irian Jaya 1961  
on *Rattus tiomanicus*, in West Malaysia 725  
reproduction in, effects of  $\gamma$ -irradiation on 298  
*Rickettsia tsutsugamushi* in  
in Maharashtra 3090  
transmission of 297, 2812
- Leptotrombidium discum*  
sp. nov., description of 2245  
in China 2245  
on *Rattus niviventer*, in Fujian 2245
- Leptotrombidium dongluensis*  
sp. nov., description of 2245  
in China 2245  
on *Rattus losea*, in Fujian 2245
- Leptotrombidium fletcheri*  
habitats of 2812  
in Indonesia 1961  
in Malaysia 725, 2812  
in oil-palm plantations, in West Malaysia 725  
on *Rattus exulans*, in Irian Jaya 1961  
on *Rattus leucopus*, in Irian Jaya 1961  
on *Rattus rattus*, in Irian Jaya 1961  
on *Rattus tiomanicus*, in West Malaysia 725  
*Rickettsia tsutsugamushi* in, transmission of 2812
- Leptotrombidium guangdongense*, descriptions of 1668
- Leptotrombidium imphalum philippinense*  
ssp. nov., description of 2490  
in Philippines 2490  
on *Nannosciurus surrutilis*, in Philippines 2490
- Leptotrombidium intermedium*  
in China 997, 2760  
on Rodentia, in Kiangsu 2760  
seasonal abundance of 997
- Leptotrombidium kawamurai*, in Japan 2230
- Leptotrombidium laxoscutum*  
sp. nov., description of 3099  
in China 3099  
on *Pipistrellus abramus*, in Shandong 3099
- Leptotrombidium nanlingense*  
sp. nov., description of (in *Trombiculindus*) 2247  
in China 2247  
on *Rattus bowersii*, in Guangdong 2247
- Leptotrombidium nudisensillum*  
sp. nov., description of 2246  
in China 2246  
on *Rattus niviventer*, in Yunnan 2246
- Leptotrombidium pallidum burnsi* 2230
- Leptotrombidium pallidum pallidum*, in Japan 2230
- Leptotrombidium postfoliatum*  
sp. nov., description of 2245  
in China 2245  
on *Rattus niviventer*, in Fujian 2245
- Leptotrombidium rheinwaldi*  
sp. nov., description of 1977  
in Morocco 1977  
on *Elephantulus rozeti*, in Morocco 1977  
on *Meriones libycus*, in Morocco 1977
- Leptotrombidium scutellare*, in Japan 2230
- Leptotrombidium spatzi*  
sp. nov., description of 2490  
in Tunisia 2490  
on *Dipodillus simoni*, in Tunisia 2490
- Leptotrombidium striatum* (see *Euschoengastia striata*)
- Leptotrombidium subobscureum*  
sp. nov., description of 2490  
in Philippines 2490  
on *Rattus insignis*, in Philippines 2490
- Leptotrombidium trapezoidum*  
sp. nov., description of 2245  
in China 2245  
on *Rattus bowersii*, in Fujian 2245
- Leptotrombidium umbricola*  
sp. nov., description of 1974  
in Malaysia 1974  
in oil-palm plantations, in West Malaysia 1974  
on *Rattus*, in West Malaysia 1974
- Leptotrombidium rivericola*  
in Malaysia 725  
in oil-palm plantations, in West Malaysia 725  
taxonomy of, characters distinguishing *L. umbricola* and 1974
- Leptotrombidium yui*  
in China 997, 2760  
on Rodentia, in Kiangsu 2760  
seasonal abundance of 997
- Leptotrombidium yunnanensis*  
sp. nov., description of 1667  
in China 1667  
on *Anourosorex squamipes*, in Yunnan 1667  
on *Apodemus sylvaticus*, in Yunnan 1667  
on *Trogopterus xanthipes*, in Yunnan 1667
- Lepus olotolus*, *Amphipsylla kulkarnii* on, in Nepal 3186
- lesleyae, Phlebotomus* (see *Sergentomyia lesleyae*)
- lesleyae, Sergentomyia (Phlebotomus)*
- Lesotho, Psoroptes ovis** in, on sheep 285
- lesteri, Anopheles**
- Lethane 384** (see Thiocyanic acid, 2-(2-butoxyethoxy)ethyl ester)
- letifer, Anopheles**
- L-Leucine**  
in *Aedes togoi*, utilisation by *Brugia patei* of 68  
in *Anopheles atroparvus*, utilisation by *Brugia patei* of 68  
in *Anopheles stephensi*, effects of *Plasmodium berghei* on 1199  
in *Periplaneta americana*, uptake from gut of 553  
in *Psoroptes cuniculi* 2486  
in *Psoroptes ovis* 2486
- leuckarti, Cyclops** (see *Mesocyclops leuckarti*)
- leuckarti, Mesocyclops (Cyclops)**
- leucocelaenus, Haemagogus**

- Leucocytozoon**, in, Simuliidae, transmission of 2392
- Leucocytozoon tawaki** in  
*Austrosimulium unguatum*, ultrastructure of 142
- Eudyptes pachyrhynchus*, in New Zealand 142
- leucomelas**, *Aedes*
- Leucophaea maderae**  
 abdominal exocrine glands in 337  
 activity in, rhythm of 1162  
 digestive enzymes in 1489  
 embryonic development in, ecdysteroids during 2546  
 in Netherlands 1740  
 insect growth regulators in, inhibition of chitin synthesis by 1453  
 juvenile hormones in, age-related changes in 1732  
 locomotion in, rhythm of 1168  
 mid-gut in, proteinase inhibitor in 1489  
 ovarian development in 2558  
 hormonal regulation of 254, 25
- leucosphyrus**, *Anopheles*
- Levarterenol ((R)-4-(2-amino-1-hydroxyethyl)-1,2-benzenediol)** in *Amblyomma hebraeum*, not inhibiting ATPase 2740  
 in rat, release by *Latrodectus antheratus* venom of 3115
- lewisii**, *Cladotanytarsus*
- li**, *Rhadinopsylla*
- Libellula**, preying on, *Aedes aegypti*, in Burma 1247
- Libellulidae**, helminths in, in Uzbekistan 316
- Liberia**  
*Anopheles* spp. in 1794  
*A. funestus* in 409  
*A. gambiae* in 409  
 bancroftian filariasis in 409
- Lice** (see Phthiraptera)
- Light-trap**  
 for  
*Culex tritaeniorhynchus* 99  
*Culicoides* spp. 2143  
 vandal-proofing of 3283
- Light-trap, AMSS**  
 description of 3234, 3235  
 for, *Culicidae* 3234, 3235
- Light-trap, CDC**  
 for  
*Coquillettidia perturbans* 2614  
*Culicidae* 97, 2064  
*Phlebotominae* 2150
- Light-trap, chemical**  
 for  
*Ceratopogonidae* 97  
*Culicidae* 97  
*Phlebotominae* 97
- Light-trap, electrocuting**, for, flying insects 895
- Light-trap, New Jersey**, for, *Culicidae* 1790, 2122
- lignarius**, *Panstrongylus*
- ligula**, *Gahrlepiea* (see *Schoengastiella ligula*)
- ligula**, *Schoengastiella* (*Gahrlepiea*)
- Lilac** (*Syringa vulgaris*)  
*Vespa crabro* on, damage caused by 1631
- lilaea**, *Eucalliphora*
- Lime-sulfur** (see Calcium sulfide (Ca(S<sub>2</sub>)))
- Limnephilus flavicornis**, *Bacillus thuringiensis* in, not pathogenic 1797
- Limnochares aquatica**  
 in UK 2713  
 in water supply, effects of permethrin on 2713
- Limnophyes minimus**  
 biology of 2168  
 control of, insecticides for 2168  
 in UK 2168  
 in sewage systems, in England 2168
- limpidapex**, *Phaetobanus*
- limpidus**, *Centruroides*
- Limulus polyphemus**, nervous system in 2842
- Linaloe** (see *Bursera delpechiana*)
- Lindane** ((1 $\alpha$ ,2 $\alpha$ ,3 $\beta$ ,4 $\alpha$ ,5 $\alpha$ ,6 $\beta$ )-1,2,3,4,5,6-hexachlorocyclohexane)  
 against  
*Aedes aegypti* 2640
- Lindane contd.**  
 against contd.  
*Anopheles stephensi* 2640  
*A. subpictus* 2640  
*Cochliomyia hominivorax* 1362  
*Culex quinquefasciatus* 2640  
*Demodex* spp., on man 726  
*Ixodoidea*, on sheep 320  
*Melophagus ovinus*, on sheep 320  
*Ornithodoros lahorensis* 3410  
*Paederus sabaeus* 3049  
*Pediculus capitis*, on man 559  
*Psoroptes ovis*, on sheep 3101  
*Pthirus pubis*, on man 348, 1176  
*Triatominae*, in dwellings 807  
 in fish, residues of 1274  
 in *Lucilia cuprina*, effects of  $\gamma$ -irradiation on susceptibility to 888  
 in *Periplaneta americana*  
 effects of carbon dioxide on susceptibility to 2848  
 effects of crowding on susceptibility to 2848  
 in pheasant, effects on blood of 2793  
 in poultry, residues of 2509  
 in *Rhodnius prolixus*, knockdown caused by 2777  
 resistance to, in  
*Boophilus microplus*, in South Africa 939  
*Pediculus capitis*, in Netherlands 1178  
*Psoroptes ovis* 2837  
 with phenylmethyl benzoate against  
*Pediculus capitis* 1178  
*Sarcoptes scabiei*, on pig 1959  
 with trichlorophen against  
*Anopheles* spp. 2039  
*A. atroparvus* 75  
*Culex molestus* 75  
 in building materials, persistence of 2039
- lineata**, *Wilhelmia* (see *Simulium lineatum*)
- lineatopennis**, *Aedes*
- lineatum**, *Hypoderma*
- lineatum**, *Simulium* (*Wilhelmia*)
- lineatus**, *Aedes*
- lineola**, *Tabanus*
- Linguatula serrata**  
 in Spain 3117  
 in USA 1679  
 on goat, in Spain 3117  
 on *Sylvilagus floridanus*, in USA 1679
- Linognathus**  
 control of, insecticides for 503  
 on sheep, in Iran 503
- Linognathus pedalis**  
 control of 2524  
 in USA 2524  
 life-cycle of 344  
 on sheep, in Wyoming 2524
- Linognathus stenopsis**  
 control of 344  
 in Mauritius 344  
 life-cycle of 344  
 on goat, in Mauritius 344
- Linognathus vituli**  
 biology of 2291, 2853  
 control of 258, 2853  
 in Australia 258  
 in Canada 1742  
 in New Zealand 2290, 2291  
 in USA 2853  
 on cattle  
 distribution pattern of 2291  
 effects of 2015  
 in New Zealand 2290  
 in Ontario 1742  
 in Queensland 258  
 in USA 2853  
 seasonal abundance of 2290
- Linoleic acid** (see 9,12-Octadecadienoic acid, (9Z,12Z)-)
- Linolenic acid** (see 9,12,15-Octadecatrienoic acid, (9Z,12Z,15Z)-)
- $\gamma$ -Linolenic acid** (see 6,9,12-Octadecatrienoic acid, (6Z,9Z,12Z)-)
- Liohippелates apicatus**, taxonomy of, transferred from *Hippelates* 1832
- Liohippелates bishoppi**, taxonomy of, transferred from *Hippelates* 1832
- Liohippелates collusor**, taxonomy of, transferred from *Hippelates* 1832
- Liohippелates pallipes**, taxonomy of, transferred from *Hippelates* 1832
- Liohippелates robertsoni**, taxonomy of, transferred from *Hippelates* 1832
- Liomys pictus**, Hoplopleuridae on, in Mexico 1465
- Lipase**, triacylglycerol, in *Sarcophaga bullata*, activity at low temperatures of 3027
- lipooides**, *Tricholipeurus*
- Lipeurus caponis**  
 in Nigeria 2013  
 on fowl, in Nigeria 2013
- Lipeurus lawrensis** (see *Numidilipeurus lawrensis*)
- Lipids**  
 in arthropod cuticle, techniques, book 3131  
 in *Dermacentor andersoni* foveal glands, storage of sex pheromone in 3404  
 in *Dermacentor variabilis* foveal glands, storage of sex pheromone in 3404  
 in *Glossina morsitans*  
 effects of endosulfan on 2680  
 transport of 2682  
 in *Glossina morsitans* milk glands, synthesis during pregnancy of 1094  
 in *Glossina palpalis* 2402  
 in *Haematobia irritans* ovaries 898  
 in *Hypoderma oenocytes* 1592  
 in insect cuticle 1159  
 in insect diets, requirements for 2834  
 in *Musca domestica* eggs, effects of  $\gamma$ -irradiation on 478  
 in *Musca domestica* larvae, effects of diet on 1364  
 in *Rhodnius prolixus*, visualising of 2861  
 in *Sarcophaga bullata* hemolymph, not affected by abscisic acid 3360  
 in *Solenopsis invicta* post-pharyngeal glands 2203
- Lipofuscins**, in *Musca domestica* brain, as indicator of aging 460
- Liponyssoides muris**  
 in Burma 1962, 2478  
 on *Bandidota bengalensis*, in Burma 2478  
 on *Rattus*, in Burma 1962  
 seasonal abundance of 2478
- Liponyssus bacoti** (see *Ornithonyssus bacoti*)
- Liponyssus sylviarum** (see *Ornithonyssus sylviarum*)
- Lipoproteins**, in *Glossina morsitans* hemolymph, diglyceride transport by 2682
- Lipoptena cervi**  
 collecting of 1894  
 descriptions of 1894  
 in German Democratic Republic 1721  
 life history of 1894  
 on deer, in German Democratic Republic 1721  
 preparing of 1894
- listeri**, *Anopheles*
- Listeria monocytogenes**  
 in  
 birds, in Kirghizia 1033  
*Hyalomma marginatum*, effects on respiration of 250  
*Rhipicephalus bursa*  
 multiplication of 262  
 persistence of 262  
*Xenopsylla cheopis*, parenteral infection with 1515
- Listrophoridae**, taxonomy of 2770
- Listrophoroides decoratus**  
 sp. nov., description of 2772  
 in Pakistan 2772  
 on *Meriones hurrianae*, in Pakistan 2772  
 on *Rattus rattus*, in Pakistan 2772
- Listrophoroides exilis**  
 sp. nov., description of 2772  
 in Pakistan 2772  
 on *Bandidota bengalensis*, in Pakistan 2772  
 on *Mus musculus*, in Pakistan 2772
- Listrophoroides pakistanicus**  
 sp. nov., description of 2772  
 in Pakistan 2772  
 on *Mus musculus*, in Pakistan 2772



- Listrophoroides pakistanicus* *contd.*  
on *Tatera indica*, in Pakistan 2772
- Litomosoides carinii*, in, *Ornithonyssus*  
*bacoti*, pathogenicity of 121
- littoralis*, *Spodoptera*
- litura*, *Spodoptera*
- Liver**  
bait component for, *Monomorium*  
*pharaonis* 693  
diet component for, *Forcipomyia taiwana*  
418
- Liver powder**, diet component for, *Culex*  
*tritaeniorhynchus* 3255
- Livestock**  
arboviruses in, in Australia 2652  
arthropod parasites of, in Mongolia 1480  
arthropod pests of, in Australia 18, 19,  
2832  
*Culicoides* spp. on, in Transbaikalia 1030  
Diptera on, in Ukraine 1024, 1055  
fly control on 199  
insecticides for 1362  
insect pests of  
in Australia 2831  
in Canada 782  
pest control on 1480  
insect growth regulators for,  
implantable delivery systems for  
2829  
*Simulium* spp. on, in Manitoba 3311  
*S. reptans* on, in Austria 3316  
*Trypanosoma* spp. in  
in Upper Volta 1304  
in Zambia 1308
- Livestock farms**, synanthropic flies in,  
movement to towns of 900
- lividus*, *Ixodes*
- Lizard**  
*Eutrombicula batatas* on, in Arizona 982  
*Leishmania* spp. in, in Kenya 2972  
Phlebotominae on, in Kenya 2972  
preying on, *Ornithodoros ambulus*, in Peru  
275
- Lizard, sleepy** (see *Trachydosaurus rugosus*)
- llanosmartinsi*, *Lutzomyia* (*Psychodopygus*)
- llanosmartinsi*, *Psychodopygus* (see  
*Lutzomyia llanosmartinsi*)
- Loa loa*, in, man, in Gabon 861
- Locomotion**  
*Blattella germanica* 2557  
*Periplaneta americana* 1485, 2287
- Locusta migratoria**  
*Echinonema cinctum* in, development of  
692  
gut in, passage of proteins through 200  
*Naja mossaibica* venom in, toxicity of  
200
- lonchaearum*, *Trichopria*
- longiareolata*, *Culiseta*
- longiceps*, *Enderleinellus*
- longicornis*, *Chrysops*
- longicornis*, *Damalinia* (see *Rhabdopediton*  
*longicornis*)
- longicornis*, *Haemaphysalis*
- longicornis*, *Philonthus*
- longicornis*, *Rhabdopediton* (*Damalinia*)
- longifrons*, *Dinopsyllus*
- longiloba*, *Peromyscopsylla ostsibirica* (see  
*P. ostsibirica*)
- longior*, *Tyroglyphus* (see *Tyrophagus*  
*longior*)
- longior*, *Tyrophagus* (*Tyroglyphus*)
- longipalpa*, *Supella*
- longipalpe*, *Simulium*
- longipalpis*, *Glossina*
- longipalpis*, *Lutzomyia*
- longipennis*, *Culicoides*
- longipennis*, *Hippobosca*
- longipes*, *Afrolabidocarpus*
- longula*, *Hoplopleura*
- longus*, *Haematopinus*
- Louisiana**  
*Amblyomma americanum* in, natural  
enemies of 2209  
*Haematobia irritans* in, natural enemies of  
2209  
*Psorophora columbiae* in, in rice-fields  
3278  
*Tabanus* spp. in, in hardwood forests  
2440
- Louping ill**  
virus  
in  
horse, infectivity of 712  
*Ixodes ricinus*, infectivity of 712  
sheep, in UK 1946
- Louse** (see *Phthiraptera*)
- Louse infestations**  
in Asian buffalo 2250  
in camel 1175  
in cat 1177, 2012  
in cattle 245, 258, 1177, 1742, 2015,  
2290, 2291, 2525, 2853  
in dog 1177  
in donkey 1177  
in fowl 340, 1177, 1493, 2013, 2564  
in goat 344, 1177  
in guinea-fowl 1493, 2569  
in horse 1177, 2855  
in man 34, 347, 348, 559, 768, 1135,  
1142, 1147, 1174, 1178, 1498, 2014,  
2292, 2570, 2814  
in pheasant 340  
in pig 346, 802, 985, 1177, 1743, 1959  
in pigeon 1495  
in poultry 32  
in sheep 503, 1177, 2524, 2850  
in zebu 2538
- Loxodonta africana*, *Ruttenia loxodontis* on,  
in Czech zoo 2451
- loxodontis*, *Ruttenia*
- Loxosceles*, on man, effects of bites by  
1478
- Loxosceles laeta*  
survival in, with minimal food 2785  
venom of, collecting of 523
- Loxosceles reclusa*  
in USA 3430  
in basements, in Iowa 3430  
prey of 3430  
venom glands in 304  
venom of, immune serum to 2498
- Loxosceles vonwredei*  
sp. nov., description of 2257  
in South-West Africa 2257
- Lucerne* (*Medicago sativa*)
- Lucerne hay*, in cattle diet, effects on *Musca*  
*autumnalis* in dung of 2441
- Lucilia**  
control of, traps for 895  
in New Caledonia 3339  
in Norway 2408  
in Thailand 662  
wings in, morphometric characters of  
1352
- Lucilia bufonivora*  
in Netherlands 222  
on *Bufo bufo*, in Netherlands 222
- Lucilia caesar*  
in Norway 2408  
in Yugoslavia 221  
mercury in, accumulation of 221  
on sheep, in Norway 2408
- Lucilia cuprina**  
behaviour in 166  
chromosomes in, maps of 2202  
control of 162, 166, 176, 177, 178, 179,  
180, 181, 2718  
biological 3037  
chemicals for 170  
cost of 163  
drying agents for 2174  
economics of 1924  
genetic 167  
insecticides for 183, 194, 757, 888,  
1382, 1924, 2174  
testing of 169  
lowering fleece moisture for 175  
pizzle dropping for 182  
cuticle in, effects of DOPA-decarboxylase  
inhibitors on 911  
descriptions of 893  
dieldrin in, effects on field performance of  
2435  
dieldrin resistance in  
in Victoria 2199  
purposely linked to Y chromosome  
2435  
diflubenzuron in, effects on chitin  
deposition of 911  
embryonic development in  
effects of moisture on 1909  
effects of temperature on 1909
- Lucilia cuprina* *contd.*  
enzymes in 1382  
in Australia 16, 161, 162, 163, 164, 165,  
168, 170, 175, 178, 179, 180, 181, 182,  
183, 194, 779, 2174, 2199, 2718, 2832  
in USA 1346  
in USA (Hawaii) 480  
in fowl carcasses, in Hawaii 480  
insecticide resistance in  
in Australia 168  
in Queensland 194  
insecticide susceptibility in, effects of  $\gamma$ -  
irradiation on 888  
life-span in, effects of chemosterilants on  
1609  
mating in, effects of chemosterilants on  
1609  
nutrition of 166  
on sheep  
effects of skin structure on susceptibility  
to 193  
in Australia 164, 2832  
in New South Wales 175, 182  
in Queensland 16  
in Victoria 2199  
in Western Australia 165  
leakage of plasma proteins to skin  
surface caused by 3039  
oviposition by, effects of bacteria on  
174  
resistance to 171, 176, 177, 178, 2718  
oosorption in 2702  
ovarian development in 2702  
oviposition in, disrupting of 166  
parasites of, mortality caused by 480  
population dynamics of, model 669, 1369  
pteridines in 192  
rearing of, genetic breakdown of strains  
during 1897  
retinal pigments in, effects of eye colour  
mutations on 2195
- Lucilia cuprina dorsalis*  
control of, genetic 668  
in Australia 668  
overwintering in 668
- Lucilia eximia*, in USA 1346
- Lucilia illustris*  
control of, growth regulators for 464  
enzymes in 2712  
in Norway 2408  
in USA 1346  
in Yugoslavia 221  
insecticide susceptibility in, role of  
microsomal oxidase in 2712  
mercury in, accumulation of 221  
methoprene in, development inhibition by  
464  
on sheep, in Norway 2408
- Lucilia sericata**  
angular acceleration compensation in  
459  
control of, insecticides for 2507, 2707  
enzymes in 2507  
in Australia 164, 165  
in Poland 2707  
in Romania 453  
in Switzerland 471  
in UK 220  
in USA 1346  
in dog dung, in England 220  
in human cadavers, development of 3037  
in sheep dung, in Poland 2707  
landing response in 1361  
movement detection system in 1361  
movement detectors in 2193  
neurosecretory system in, effects of diet on  
3358  
octopamine in, membrane depolarisation  
caused by 211  
on cat, in Missouri 1346  
on rabbit, in Missouri 1346  
on sheep  
in Australia 164  
in Poland 2707  
in Switzerland 471  
in Western Australia 165  
parasites of, in Romania 453  
proctolin in, membrane depolarisation  
caused by 211  
Risella 17 oil in, leg paralysis caused by  
1350  
sex ratio in 1599  
sex-related differences in 1599

- Lucilia sericata* contd.  
sugar receptors in, effects of antitubulin drugs on 461
- luculenta*, *Frontopsylla luggeri*, *Simulium*
- lugubris*, *Coprocera* (see *Leptocera lugubris*)
- lugubris*, *Leptocera* (*Coprocera*)
- lugubris*, *Rhopalopsyllus lukoschusi*, *Promuricheyla lukoschusi*, *Pteromychirus* (*Tamiopsochirus*)
- lukoschusi*, *Tamiopsochirus* (see *Pteromychirus lukoschusi*)
- Lumicolchicine*, in *Lucilia sericata*, inhibiting sugar receptors 461
- lunatum*, *Sphaeridium luridus*, *Aedes*
- Lutein epoxide* (see  $\beta, \epsilon$ -Carotene-3,3'-diol, 5,6-epoxy-5,6-dihydro-)
- luteocephalus*, *Aedes lutzi*, *Panstrongylus*
- Lutzomyia*, in Venezuela 419
- Lutzomyia amazonensis*  
descriptions of 1258  
in Brazil 1256  
in Peru 1256, 1259  
male of 1258  
taxonomy of 1256  
characters distinguishing *L. davis* and 1258
- Lutzomyia clautrei*  
descriptions of 139, 2390  
in French Guiana 139, 2390  
on man, in French Guiana 139  
on rodents, in French Guiana 139  
taxonomy of  
characters distinguishing *L. davis* and 2390  
characters distinguishing *L. robini* and 2390
- Lutzomyia davis*  
descriptions of 2390  
in Brazil 2390  
in French Guiana 2390  
taxonomy of  
characters distinguishing *L. amazonensis* and 1258  
characters distinguishing *L. clautrei* and 2390  
characters distinguishing *L. robini* and 2390
- Lutzomyia flaviscutellata*, in Peru 1259
- Lutzomyia intermedia*  
in Brazil 2970  
in artificial ecotopes 2970
- Lutzomyia llanosmartinsi*  
sp. nov., description of (in *Psychodopygus*) 1257  
descriptions of 1258  
in Brazil 1257  
in Peru 1257  
on man, in Brazil 1257
- Lutzomyia longipalpis*  
bluetongue virus in, replication of 138  
Pacui virus in, replication of 635  
sandfly fever, virus in, not replicating 635
- Lutzomyia olmea bicolor*  
host preferences in 2150  
in Panama 2150  
seasonal abundance of 2150
- Lutzomyia panamensis*  
host preferences in 2150  
in Panama 2150  
seasonal abundance of 2150
- Lutzomyia paraensis*, in Peru 1259
- Lutzomyia robini*  
sp. nov., description of 2390  
in French Guiana 2390
- Lutzomyia sanguinaria*  
host preferences in 2150  
in Panama 2150  
seasonal abundance of 2150
- Lutzomyia trinidadensis*  
habitats of 632  
in Venezuela 632  
on domestic animals, in Venezuela 632  
on man, in Venezuela 632
- Lutzomyia umbratilis*  
biology of 2969  
enzymes in 140  
in French Guiana 140, 1154, 2969  
in Peru 1259
- Lutzomyia umbratilis* contd.  
*Leishmania* spp. in, in French Guiana 2969  
on *Choloepus didactylus*, in French Guiana 2969  
on man, in French Guiana 140  
on *Potos flavus*, in French Guiana 2969  
on *Proechimys*, in French Guiana 2969
- Lutzomyia vespertilionis*  
host preferences in 2150  
in Panama 2150  
seasonal abundance of 2150
- Lutzomyia yuilli pajoti*  
in French Guiana 422  
on man, in French Guiana 422
- Luxembourg*  
*Ixodoidea* in, bibliography 2751  
*Tabanidae* in 449  
tick-borne diseases in, bibliography 2751
- luzonensis*, *Lirhinus lybacia*, *Laelaps*
- Lychas*  
in Zimbabwe 1428  
on man, stings by 1428
- Lycopersicon esculentum* (see Tomato)
- Lycotocoris campestris*  
in Switzerland 564  
in *Passer domesticus* nests, in Switzerland 564  
in *Turdus merula* nests, in Switzerland 564  
on man, in Switzerland 564
- Lymantria dispar*, on man, hypersensitivity to 319
- Lyme arthritis* (see Arthritis, infectious)
- Lymnaea ovata*, parasitised by, *Sciomyzidae*, in France 1349
- Lymnaea stagnalis*, parasitised by, *Sciomyzidae*, in France 1349
- Lynx canadensis*, *Euhoplosyllus glacialis* on, in Alaska 2322
- lynx*, *Euhoplosyllus glacialis*
- lynx*, *Hoplosyllus glacialis* (see *Euhoplosyllus glacialis lynx*)
- Lynxacarus echinosorex*, taxonomy of, transferred to *Echinossorella* 2770
- Lynxacarus mustelae*  
in Poland 323  
on *Mustela*, in Poland 323
- Lynxacarus talpae*, taxonomy of, transferred to *Dubininetta* 2770
- Lyperosia* (see *Haematobia*)
- Lyperosia exigua* (see *Haematobia irritans exigua*)
- Lyperosia irritans* (see *Haematobia irritans*)
- Lyperosia titillans* (see *Haematobia thirouxi titillans*)
- lypusus*, *Dinopsyllus*
- L-Lysine*  
in *Aedes aegypti* diet, utilisation of 2047  
in *Aedes togoi*, utilisation by *Brugia pateri* of 68  
in *Anopheles atroparvus*, utilisation by *Brugia pateri* of 68  
in *Anopheles stephensi*, effects of *Plasmodium berghei* on 1199
- Lysozid S* (see Fenitrothion, with malathion, and pyrethrins)
- Lysozyme*, in *Ornithodoros moubata*, bactericidal activity of 2745
- M-1960** (see Acetamide, *N*-butyl-*N*-phenyl-, with 2-butyl-2-ethyl-1,3-propanediol, and phenylmethyl benzoate)
- Macaca arcoides*, *Cosarcoptes scanloni* on, in New York State 3421
- Macaca umbrosus*  
*Anopheles sudaicus* on, in Andaman and Nicobar Islands 2058  
*Plasmodium cynomolgi* in, in Andaman and Nicobar Islands 2058
- Macaroni*, naled in, uptake from air of 2266
- macellaria*, *Callitroga* (see *Cochliomyia macellaria*)
- macellaria*, *Cochliomyia* (*Callitroga*)
- machadoi*, *Culex*
- Macrobrachium raridens*  
deltamethrin in, toxicity of 2982  
in Upper Volta 2982
- Macrocheles*  
development in, effects of temperature on 660  
in New Zealand region 3092
- Macrocheles* contd.  
in rodent nests, in Transbaikalia 1032  
prey specificity in 931  
preying on, *Musca domestica*, and biological control using 931
- Macrocheles glaber*  
in Hungary 2244  
intraspecific competition in 930  
Malpighian tubules in 926  
preyed on by, *Parasitus coleoptratorum* 930
- Macrocheles matrius*, intrinsic rate of natural increase of 660
- Macrocheles muscaedomesticae*  
in New Zealand Island Territories 3092  
in birds' nests, in Kermadec Islands 3092  
intrinsic rate of natural increase of 660
- Macrocheles penicilliger*, intrinsic rate of natural increase of 660
- Macrocheles peniculatus*, intrinsic rate of natural increase of 660
- Macrocheles pergaber*, intrinsic rate of natural increase of 660
- Macrocheles robustulus*  
in New Zealand Island Territories 3092  
in birds' nests, in Kermadec Islands 3092  
intrinsic rate of natural increase of 660
- Macrocheles subbadius*, intrinsic rate of natural increase of 660
- Macronychia*, parasitising, *Hybomitra lasiophthalma*, in Texas 907, 2167
- Macronychia aurata* 907
- Macronyssus*, on bat, in Moldavia 1077
- Macropodus cupanus*  
feeding behaviour in 2351  
preying on, *Culex quinquefasciatus* 2351
- Macrostylophora*, distribution of 1188
- Macrostylophora hebeiensis*  
sp. nov., description of 1188  
in China 1188  
on *Trogopterus xanthipes*, in Hebei 1188
- Macrostylophora microcopa*, taxonomy of, characters distinguishing *M. paoshanensis* and 818
- Macrostylophora paoshanensis*  
sp. nov., description of 818  
in China 818  
on *Sciurotamias davidianus*, in Yunnan 818
- Macrotylacia rubi*  
in Denmark 690  
on man, osteitis caused by 690
- maculans*, *Latrodectus maculata*, *Byssodon* (see *Cnephia maculata*)
- maculata*, *Cnephia* (*Byssodon*)
- maculata*, *Dolichovespula* (*Vespula*)
- maculata*, *Hippobosca* (see *H. variegata*)
- maculata*, *Notonecta*
- maculata*, *Triatoma*
- maculata*, *Vespula* (see *Dolichovespula maculata*)
- maculatum*, *Amblyomma maculatus*, *Anopheles maculatus*, *Dermestes maculicornis*, *Tabanus maculifrons*, *Vespula maculipennis*, *Anopheles Madeira*, *Culex molestus* in 1240
- maderae*, *Leucophaea magna*, *Daphnia magna*, *Sergentomyia africana*
- Magnesium**  
in *Aedes aegypti*, dependence of methenyltetrahydrofolate synthetase activity on 838  
in *Rhodnius prolixus*, inhibiting salivary apyrase 1509  
in *Simulium* breeding water 2666
- magnifica*, *Wohlfahrtia*
- Magpie* (see *Pica pica*)
- Maine**  
*Prosimulium mixtum* in, on man 425  
*Simulium* spp. in, on man 425  
*S. penobscotensis* in 1848
- Maize** (*Zea mays*)
- Maize-cob grits**, bait component for, *Cochliomyia hominivorax* 2169
- Maize meal**, in rodent baits containing acaricides 1412
- major**, *Phlebotomus major*, *Trichopria*



- Makisterones**, immune sera to 787
- malaccensis**, *Cheyletus*
- Malagasy Republic**
- Ixodoidea* in 3060
- Sergentomyia berentensis* in, on man 2389
- Malaraeus penicilliger** (see *Amalaraeus penicilliger*)
- Malaria** (see also *Plasmodium*)
- book 2380
- control of 829, 2285
- in Brazil 1202
- in rural areas 326
- vector control for 86, 617, 624, 850, 2054
- in Afrotropical region 3195
- in Andaman and Nicobar Islands 2058
- in Brazil 1767
- in California 2080
- in China 2880
- in France 3198
- in French Guiana 1154
- in India 2372
- in Irian Jaya 1776
- in Italy 2128
- in Nigeria 829
- in Pakistan 617
- in Philippines 2804
- in Queensland 1552
- in Saudi Arabia 623
- in South-East Asia 2822
- in South Korea 2122
- in Tamil Nadu 2373, 3217
- in Turkey 76
- in UK 3277
- in Ukraine 1041
- in USSR 86
- in 1978 1778, 1779, 1780, 1781
- review 2127, 3194
- Malassezia pachydermatis**
- in
- Canis latrans*, in New York State 2240
- Erethizon dorsatum*, in New York State 2240
- Sarcoptes scabiei*, in New York State 2240
- Vulpes fulva*, in New York State 2240
- Malathion** (diethyl [(dimethoxyphosphinothioyl)thio]butanedioate)
- against
- Aedes aegypti* 116, 412, 1245, 2133, 2640
- in cemeteries 3247
- A. africanus* 2918, 2919
- A. pseudoscutellaris* 412
- A. vexans* 2040
- Anopheles* spp. 2039
- A. annularis* 1775
- A. atroparvus* 75
- A. culicifacies* 103, 617, 1775, 2382, 3218
- A. maculipennis* 2911
- A. nigerrimus* 1775
- A. pulcherrimus* 1775, 2917
- A. quadrimaculatus* 1193
- A. sacharovi* 76, 2917
- A. stephensi* 617, 2640
- in dwellings 2912
- A. subpictus* 1775, 2640
- Armigeres subalbatus* 2640
- Blattaria* 788
- Boophilus microplus*, on cattle 2746
- Chironomidae* 3346
- Culex molestus* 75, 401
- C. pipiens* 2040
- C. quinquefasciatus* 2640, 2913
- in pig waste 374
- C. sitiens* 2640
- C. tritaeniorhynchus* 2640
- C. whitmorei* 2640
- Culicidae* 383, 2122, 2361, 3209
- Culicoides mississippiensis* 1842
- Goniocotes gallinae*, on poultry 32
- Mansonia bonnea* 413
- M. dives* 413
- Menopon gallinae*, on poultry 32
- Musca domestica* 528, 1893
- Ornithodoros lahorensis* 3410
- Pediculus capitis* 345
- on man 559
- Psorophora columbiae* 1193
- Stivialis cognatus*, on *Rattus* 3188
- Triatominae*, in dwellings 807, 1137
- Malathion contd.**
- against contd.
- Xenopsylla cheopis* 565, 1190
- on *Rattus* 3188
- formulations of 2361
- determining impurities in 526
- in *Anopheles gambiae*, not affecting *Plasmodium yoelii* 824
- in *Anopheles maculipennis*, effects on behaviour of 95
- in *Anopheles stephensi*, not affecting *Plasmodium yoelii* 824
- in *Bacillus thuringiensis*, toxicity of 312
- in building materials, persistence of 2039
- in man, toxicity of 2952
- in pastures, safety of 2952
- in pheasant, effects on blood of 2793
- in poultry, toxicity of 32
- in rat, toxicity of, effects of drugs on 750
- in ULV sprays, safety of 2952
- on walls, persistence of 401
- resistance to, in
- Aedes aegypti*, in Puerto Rico 2136
- Anopheles culicifacies*
- in Andhra Pradesh 607
- in Gujarat 2382
- A. sacharovi*, in Turkey 76
- A. stephensi*
- in Iraq 2917
- in Pakistan 1775, 2915
- Culex pipiens* 2604
- C. quinquefasciatus* 1221
- development of 3269
- Culicidae*
- in Utah 3212
- overcoming of 2887
- Musca domestica*
- mechanisms of 1606
- role of cuticular wax in 198
- Ornithonyssus sylvianus*, in Israel 290
- Stivialis cognatus*, in Java 565, 1190
- specifications for 526
- with fenitrothion, and pyrethrins, against, *Alphitobius diaperinus*, in fowl housing 687
- with methoxychlor
- against
- Haematobia irritans*, on cattle 1915
- Musca autumnalis*, on cattle 1915
- with pyrethrins, against, *Musca domestica* 2191
- with trichlorphon, against, *Culex pipiens* 2604
- malayi**, *Hyleopecheyla*
- Malaysia**
- Aedes aegypti* in 1245, 1800
- A. albopictus* in 1245
- Anopheles balabacensis* in 2055
- A. donaldi* in, in dwellings 1799
- A. letifer* in 598
- arboviruses in 1246
- Austroglycyphagus* spp. in, in house dust 1000
- Cheyletidae* in 2771
- Chrysomya bezziana* in, on man 2170
- dengue hemorrhagic fever in 1245, 2130
- ectoparasites in 2803
- Leptotrombidium* spp. in
- in oil-palm plantations 725
- rickettsiae in 2812
- L. umbricola* in, on *Rattus* 1974
- Mansonia bonnea* in 413
- M. dives* in 413
- Myobiidae* in, on rodents 2483
- Schoengastia vieta* in, on rat 513
- Tabanidae* in 2808
- Trombiculidae* in 2811
- in oil-palm plantations 1973
- on *Rattus* 1412
- Whartonia dewitti* in, on *Rhinolophus* 730
- zebu in, arthropod pests of 2538
- malaysiensis**, *Austroglycyphagus*
- malaysiensis**, *Myobia*
- Maldives**
- Anopheles subpictus* in 2127
- A. tessellatus* in 2127
- malaria in 2127
- Mali**
- Glossina morsitans* in 2996
- G. palpalis* in 2996
- G. tachinoides* in 2996
- mites in, in house dust 3094
- Mali contd.**
- Simulium* spp. in 1704
- Malic acid** (see Butanedioic acid, hydroxy-)
- malikuli**, *Aedes*
- Malloewia**, gen. nov., description of 1832
- Malloewia neglecta**, taxonomy of, transferred from *Siphonella* 1832
- Mallophaga**
- blood-feeding in, evolution of 1170
- control of 2525
- in Iraq 3142
- in New Zealand 1494
- in Nigeria 2003
- on *Agelaius phoeniceus*, in North America 4
- on birds
- in Hungary 2012
- in Spain 340
- on cattle, in Wyoming 2525
- on mammals, in Hungary 2012
- pathogens of, bibliography 2517
- Malta**, *Vespoidea* in 1384
- Maltase** (see Glucosidase,  $\alpha$ -)
- Maltose** (see D-Glucose, 4-O- $\alpha$ -D-glucopyranosyl-)
- malyshevi**, *Gnus* (see *Simulium malyshevi*)
- malyshevi**, *Simulium* (*Gnus*)
- Mamestra brassicae**
- cell cultures from 1997
- moulting hormones in, developmental changes in 667
- Nosema algerae* in, replication of 112
- Mammal nests**, mites in, in USSR 1053
- Mammals**
- Anoplura* on, in Saudi Arabia 2527
- Gamasoidea* on, in Hungary 2244
- Haemolaelaps* spp. on, in Afrotropical region 3422
- Ixodidae* on, in Oklahoma 2465
- Ixodoidea* on, in Morocco 3403
- Mallophaga* on, in Hungary 2012
- microbial biocontrol agents in, safety of 2799
- Phlebotominae* on, in Panama 2150
- Phthiraptera* on
- in Afrotropical region, book 1177
- in New Zealand 1494
- Siphonaptera* on
- in Alaska 2584
- in Michigan 2585
- in New Zealand 2312
- Trombiculidae* on, in Indiana 1966
- Mammals, small**
- Acari* on, in Czechoslovakia 933
- Anoplura* on, in USSR 2571
- arthropod parasites of
- in Maritime Territory 491
- in USSR 1046
- Astigmata* on, in South Dakota 511
- Babesia microti* in, in England 971
- ectoparasites of, in Scandinavia 2338
- Gamasoidea* on, in Bulgaria 1659
- Haemaphysalis japonica* on, in Maritime Territory 2734
- Hoplopleuridae* on, in Burma 1496
- Hystrichopsyllidae* on, in Morocco 3183
- Ixodes trianguliceps* on, in England 971
- Mesostigmata* on, in Czechoslovakia 2232
- mites in nests of, methods for studying 930
- Nosopsyllus* spp. on, in USSR 3179
- Peromyscus silvatica* on, in Siberia 1052
- Siphonaptera* on
- in Pyrenees 2340
- in Scandinavia 2340
- in Siberia 3184
- in USSR 2871
- tick-borne encephalitis, virus in, in USSR 716
- Trombiculidae* on
- in Africa 1660
- in Bulgaria 1664
- mammillifer**, *Culex*
- Man**
- Acarus siro* on, role in colitis of 980
- Aedes* spp. on, in Gambia 393
- A. aegypti* on
- in Nigeria 1230
- in Thailand 82
- not affected by cystic fibrosis 621
- A. africanus* on, in Nigeria 1230

## Man contd.

- Aedes* contd.  
*A. albopictus* on  
in Hawaii 1796  
in Thailand 82  
*A. daitensis* on, in Ryukyu Islands 2947  
*A. luteocephalus* on, in Nigeria 1230  
*A. sierrensis* on, feeding by 2100  
*A. simpsoni* on, in Nigeria 591  
*A. triseriatus* on, in Wisconsin 2935  
*A. vexans* on, in USSR 2597  
*Amblyomma cajennense* on, in Jamaica 2463  
*Anastrepha* spp. on, in Costa Rica 1344  
*Anopheles* spp. on, in Papua New Guinea 1771  
*A. balabacensis* on, in Arunachal Pradesh 624  
*A. darlingi* on, in Brazil 1793  
*A. donaldi* on, in West Malaysia 1799  
*A. gambiae* on, in Tanzania 1836  
*A. merus* on, in Tanzania 1836  
*A. sacharovi* on, in Azerbaijan 853  
*A. subpictus* on, in Indonesia 1777  
*A. sundaeus* on, in Andaman and Nicobar Islands 2058  
*A. takasagoensis* on, in Taiwan 2070  
*Apis mellifera* on  
hypersensitivity to  
diagnosis of 1933, 3383  
treatment of 2459  
Araneae on, effects of bites by 1478  
arboviruses in  
in Central Africa, review 1826  
in tropics, review 1945  
in West Africa, review 1826  
*Argas brumpti* on, effects of bites by 1942  
arthropod parasites of, skin diseases caused by 1148  
arthropod pests of  
book 539, 1153  
in Australia 18, 19  
in Tasmania 533, 1720  
arthropods on, hypersensitivity to 319  
*Babesia* spp. in 3396  
review 940  
*B. microti* on, in North America 3397  
Blattaria on, hypersensitivity to 2132  
Buthidae on, stings by 1428  
*Calyptra eustrigata* on, feeding by 916  
*Carpoglyphus lactis* on, in China 516  
*Ceratophyllus gallinae* on, in Scotland 2341  
*Chagasia bonneae* on, in Brazil 1769  
*Cheyletiella* spp. on  
dermatitis caused by 1965  
in Japan 983  
*C. blakei* on, transfer from cat of 288, 1414  
*C. parasivorax* on, transfer from rabbit of 288  
*C. yasguri* on  
hypersensitivity to 12  
pruritus caused by 1417  
transfer from dog of 1414  
Chironomidae on, in USA 912  
*Chrysomya bezziana* on, in West Malaysia 2170  
*Cimex* spp. on, antibodies to 562  
*Cladotanytarsus lewisi* on, hypersensitivity to, diagnosis of 1596  
*Cochliomyia hominivorax* on, in Netherlands Antilles 457  
*Cordylobia anthropophaga* on  
furunculosis caused by 2417  
in Ghana 1375  
in Saudi Arabia 2537  
*Cosarcoptes scanloni* on, in New York State 3421  
*Ctenocephalides orientis* on 2837  
*Culex* spp. on, no antibodies to 562  
*C. ocossa* on, in Panama 2923  
*C. panocossa* on, in Panama 2923  
*C. pipiens* on, in Honshu 2908  
*C. quinquefasciatus* on  
hypersensitivity to 2132  
in Andhra Pradesh 2599  
in Brazil 2383, 2655, 2656, 2657  
Culicidae on  
in Argentina 400  
in Bismarck Archipelago 833  
in Panama 2283

## Man contd.

- Culicidae on contd.  
in Ryukyu Islands 1217  
in South Africa 84  
prurigo caused by 1764  
*Culicoides* spp. on  
in Colombia 2156  
in South Africa 84  
in Transbaikalia 1030  
*C. occidentalis* on, in California 2385  
*C. paraensis* on, in Brazil 2655, 2656, 2657  
*C. phlebotomus* on, in Trinidad 2386, 2387  
*C. subimmaculatus* on, in Queensland 2143  
*Cuterebra fontinella* on, in Ontario 155  
*Cydostomyia emergens* on, in South Africa 2716  
DDT in, uptake through skin of 292  
*Demodex* spp. on  
effects of 726  
role in blepharitis of 1666  
*D. folliculorum* on, blepharitis caused by 1415  
*Dermanyssus americanus* on, dermatitis caused by 1670  
*D. gallinae* on, rash caused by 2242  
*Dermatophagoides* spp. on,  
hypersensitivity to 923, 2489  
*D. farinae* on  
hypersensitivity to 991, 1420, 3108, 3110  
diagnosis of 723, 989, 990  
seasonal variation in 2227  
treatment of 1426  
*D. pteronyssinus* on  
antibodies to 1955  
hypersensitivity to 520, 724, 769, 1654, 1958, 1975, 2492, 3109, 3110, 3111, 3112  
diagnosis of 989, 990, 992, 1419  
treatment of 739, 1426, 2763  
Diptera on, in Ukraine 1024, 1055  
ectoparasites of  
in Indonesia 2802  
in Thailand 2805  
in West Malaysia 2803  
*Euroglyphus maynei* on, hypersensitivity to 923  
*Eutrombicula batatas* on, in Arizona 982  
Formicidae on, hypersensitivity to 2132  
*Glossina morsitans* on, in Gambia 1317  
*G. palpalis* on  
in Congo 2994  
in West Africa 1873  
*G. tachinoides* on, in West Africa 1873  
*Haemagogus* spp. on, in Brazil 2627  
Heteroptera on, in central Europe 803  
house-dust mites on, hypersensitivity to, diagnosis of 3420  
Hymenoptera on  
hypersensitivity to 1930  
diagnosis of 1389, 2455  
stings by 3052  
*Hypoderma* spp. on, diagnosis of 652  
insect fauna as affected by 2000  
insect pests of  
in Australia 2831  
in Canada 782  
insect stings in, large local reactions to 1630  
insecticides in, poisoning by 2006  
*Ixodes dammini* on, in USA 269  
Ixodidae on, in Connecticut 1398  
Ixodoidea on, disease transmission by 2316  
*Latoia vivida* on, urticaria caused by 485  
*Latrodectus mactans* on, bite by, treatment of 3113  
*Lepiselaga crassipes* on, in Brazil 2187  
*Leptoconops foulki* on, in California 415  
*Lutzomyia clautrei* on, in French Guiana 139  
*L. llanosmartinsi* on, in Brazil 1257  
*L. trinidadensis* on, in Venezuela 632  
*L. umbratilis* on, in French Guiana 140, 2969  
*Lycocoris campestris* on, in Switzerland 564  
malathion in, toxicity of 2952  
*Mansonella africana* on, in Gambia 393  
mites on, in Argentina 984

## Man contd.

- Musca domestica* on, hypersensitivity to 2132  
myiasis in, diagnosis of 2453  
*Neotrombicula autumnalis* on, in Belgium 2762  
occupational exposure to pesticides in 1684  
*Oeciacus vicarius* on, effects of bite by 44  
*Onchocerca volvulus* in, Simuliid transmission of 2398  
*Ornithodoros amblus* on, effects of bite by 275  
*Ornithonyssus sylviarum* on, dermatitis caused by 1672  
*Paederus sabaeus* on, dermatitis caused by 3049  
*Pediculus capitis* on  
in California 1498  
in England 1147  
in Italy 768, 2014, 2570  
in Netherlands 1178  
in New Zealand 559  
in Switzerland 1174  
in UK 347, 1142  
*P. humanus* on  
dermatitis caused by 769  
in Egypt 2292  
in England 1147  
in Switzerland 1174  
in UK 1142  
permethrin in, residues of 2292  
pest control on, treated clothing for 1763  
pesticides in, acceptable daily intakes of 3128  
phenothiazine in, toxicity of 1012  
Phlebotominae on  
in French Guiana 422  
in Panama 2283  
in Peru 1259  
*Phlebotomus argentipes* on, in West Bengal 1845  
*Piophilina casei* on, in Belorussia 884  
*Prosimulium karibaense* on, in Hokkaido 1583  
*P. mixtum* on, in Maine 425  
*Psorophora ferox* on, in Connecticut 1208  
*Pthirus pubis* on  
effects of 34  
in England 1147  
in Pennsylvania 1176  
in Switzerland 1174  
in UK 1142  
on eyelashes 2814  
on head 348  
*Pyemotes tritici* on, dermatitis caused by 769  
*P. ventricosus* on, dermatitis caused by 1657  
*P. zwoelferi* on, dermatitis caused by 1967  
*Rhinoestrus purpureus* on, in USSR 654  
*Rhodnius pallescens* on, in Panama 2576  
*Sarcophaga carnaria* on, hypersensitivity to 769  
*S. incisilobata* on, in Czechoslovakia 897  
*Sarcoptes scabiei* on  
antibodies to 1421, 2776  
diagnosis of 514  
during neonatal period 268  
immune system and 512  
in England 1147  
in Mexico 291  
in New Zealand 518  
in Sweden 1673  
in Turkey 519  
in UK 1142  
in Zimbabwe 2006  
pruritus caused by 1417  
transfer from Asian buffalo of 3417  
transfer from cattle of 2761  
Scorpiones on  
cardiovascular effects of stings by 2256  
in Spain 1427  
myocarditis caused by 1007  
*Sergentomyia baghdadis* on, in Assam 1260  
*S. berentiansis* on, in Malagasy Republic 2389  
*S. shorttii* on, in Assam 1260



**Man** *contd.*

- Simulium* spp. on  
distribution pattern of 3318  
feeding by 2981  
in Brazil 1269  
in Colombia 2156  
in Guyana 3318  
in Ivory Coast 2975  
in Maine 425  
in Manitoba 3311  
in Nigeria 2671  
in Togo 1581  
in Transbaikalia 1067  
in Upper Volta 2672  
*S. albivirgatum* on, in Zaire 1847  
*S. argentiscutum* on, in Brazil 2399  
*S. decorum* on, feeding by 2395  
*S. exiguum* on, in Colombia 638  
*S. horacioi* on, in Guatemala 1582  
*S. horokaense* on, in Hokkaido 2665  
*S. metallicum* on, in Colombia 638  
*S. ochraceum* on, uptake of microfilariae by 1584  
*S. tescorum* on, in California 2664  
Siphonaptera on  
dermatitis caused by 2872  
disease transmission by 2316  
in Alaska 2584  
in central Europe 820  
*Sitophilus granarius* on, hypersensitivity to 991  
*Stenotabanus* spp. on, in Brazil 2187  
Tabanidae on  
in Tadzhikistan 205  
in Ukraine 1078  
*Tabanus* spp. on, in Japan 1373  
tick-borne diseases of, review 3137  
tick control on 711  
protective clothing for 1946  
repellents for 1946  
treated clothing for 1937  
*Triatoma infestans* on, hypersensitivity to 3167  
*Trichodectes canis* on, in Netherlands 1135  
Trombiculidae on, in West Malaysia 2811  
*Trypanosoma brucei* in  
in Ivory Coast 1872  
in West Africa 1869  
*T. cruzi* in, oral infectivity of 2299  
*Tunga penetrans* on  
effects of 2865  
in Brazil 48  
in East Africa 52  
in Senegal 566  
*Tyrophagus longior* on, role in colitis of 980  
Vespidae on, hypersensitivity to, diagnosis of 3383  
*Vespa* spp. on  
arrhythmia caused by 915  
hypersensitivity to 1386, 1634  
*Wuchereria bancrofti* in, morphology of 605  
**Manduca sexta**  
control of  
biological 118  
growth regulators for 1453  
on man, hypersensitivity to 319  
**manfredi, Raillietia**  
**manicata, Fannia**  
**Manihot esculenta** (see Cassava)  
**Manitoba**  
*Aedes trivittatus* in, natural enemies of 622  
*Agelaius phoeniceus* in  
arthropod parasites of 4  
arthropods in nests of 864  
Culicidae in, viruses in 1809  
Simuliidae in 3311  
*Vespa germanica* in 2460  
**D-Mannose**, in *Dermacentor andersoni*, developmental changes in 1400  
**Mannosidase, α-**, in *Stomoxys calcitrans* 3030  
**manosus, Amphalius**  
**Mansonella ozzardi**  
in  
*Culicoides caprilesi*, in Colombia 2156  
*C. insinuatus*, not developing 1580  
*C. phlebotomus*, in Trinidad 2386

**Mansonella ozzardi** *contd.*

- in *contd.*  
*Lepisela crassipes*, not developing 1580  
man, in Trinidad 2386  
*Mansonella amazonensis*, not developing 1580  
*Simulium* spp.  
development of 2156  
in Brazil 1580  
*S. argentiscutum*, in Brazil 2399  
taxonomy of, characters distinguishing  
*Onchocerca volvulus* and 1580  
**Mansonia**  
*Brugia* spp. in, transmission of 3225  
control of, insecticides for 1708  
flight speed in 2363  
in Argentina 400  
in Cuba 849  
in Gambia 2363  
in Quebec 2881  
on man, in Ukraine 1024  
parasitised by, water mites, in Quebec 2354  
*Trypanosoma brucei* in, transmission of 644  
**Mansonia africana**  
in Gambia 393  
on man, in Gambia 393  
**Mansonia amazonensis**, **Mansonella ozzardi**  
in, not developing 1580  
**Mansonia annulifera**  
control of  
eliminating breeding places for 2057  
insecticides for 2057  
in India 102, 2057  
**Mansonia bonneae**  
control of, insecticides for 413  
in Malaysia 413  
**Mansonia dives**  
control of, insecticides for 413  
in Malaysia 413  
**Mansonia perturbans** (see *Coquilletidia perturbans*)  
**Mansonia pseudotitillans**  
in Brazil 2898  
Saint Louis encephalitis, virus in, in Brazil 2898  
**Mansonia uniformis**  
control of  
eliminating breeding places for 2057  
insecticides for 2057  
in China 2349  
in India 2057  
in Japan 1217  
on man, in Ryukyu Islands 1217  
**mantchuricus, Megabothris advenarius**  
**marginalis, Culicoides**  
**marginatum, Hyalomma**  
**marginatus, Dermacentor**  
**mariae, Aedes**  
Mariana Islands, Culicidae in 2117  
Marigold, African (see *Tagetes erecta*)  
Marigold, French (see *Tagetes patula*)  
**maritimus, Ornithodoros**  
Marituba virus, in, *Culex quinquefasciatus*, infectivity of 1524  
Markets, *Periplaneta americana* in, in Philippines 1727  
**markhafari, Geomydoecus**  
**marmoratus, Culicoides**  
**Marmota**, *Hybomitra turkestanica* on, in Ukraine 1024  
**Marmota caudata**, *Frontopsylla frontalis* on, in China 567  
**Marmota himalayana**, *Frontopsylla frontalis* on, in China 567  
**Marmota monax**, *Ornithodoros hermsi* on, in Oklahoma 495  
**marshallii, Anopheles**  
Marshland, *Anopheles atroparvus* in, in England 3277  
**Marsupialia**  
Atopomelidae on, in Neotropical region 286  
Boopidae on, in Western Australia 2565  
*Haemolaelaps* spp. on, in Australia 3103  
Laelapinae on, in Western Australia 1653  
Phlebotominae on, in Panama 2150  
Trombiculidae on, in Indiana 1966  
**Marten**, pine (see *Martes martes*)

- Martes martes**, *Chaetopsylla matina* on, in Poland 51  
**martini, Phlebotomus**  
**martinii, Culex**  
Martinique (indexed under French West Indies)  
**martinius, Anopheles**  
Marvex (see *Dichlorvos*)  
**marxi, Ixodes**  
Maryland, *Vespa crabro* in 1631  
**masamitsui, Tabanus**  
**mascarensis, Aedes**  
**mascitii, Phlebotomus**  
Massachusetts  
bat dung in, arthropods in 2582  
*Demodex cati* in, on cat 279  
*Dermacentor variabilis* in, rickettsiae in 967  
human babesiosis in 3397  
*Ixodes dammini* in, sporozoans in 1651  
*Orchopeas caedens* in, on *Glaucomys* 3182  
*Tabanus lineola* in, in salt marshes 1906  
*T. nigrovittatus* in, in salt marshes 1906  
**Mastigophora** 1266, 3013, 3136, 3174  
**Leishmania** 326, 420, 634, 764, 1084, 1086, 1154, 1254, 1255, 1260, 1261, 1576, 1688, 1844, 2148, 2150, 2530, 2536, 2969, 3308  
*L. donovani* 132, 133, 134, 867, 2972  
*L. gymnodactyli* 867  
*L. major* 867, 2146, 2147  
*L. tropica* 2535  
*Leptomonas* 2866, 2873  
*L. pessoai* 867  
*Trypanosoma* 943, 1083, 1084, 1299, 1302, 1304, 1470, 1587, 1695, 1865, 1866, 1867, 1868, 1874, 1877, 1879, 1886, 1887, 2150, 2993, 2994, 3006, 3327, 3328  
*T. brucei* 149, 644, 651, 875, 1298, 1303, 1305, 1307, 1308, 1309, 1310, 1311, 1312, 1322, 1332, 1333, 1335, 1869, 1871, 1872, 1873, 3326  
*T. congolense* 153, 1085, 1114, 1298, 1301, 1303, 1305, 1306, 1307, 1308, 1312, 1870, 2162, 2164, 2381  
*T. cruzi* 36, 37, 38, 42, 326, 349, 351, 352, 806, 807, 811, 812, 1137, 1154, 1474, 1504, 2017, 2020, 2295, 2296, 2299, 3138, 3172, 3173, 3176  
*T. evansi* 184, 1303, 1306, 2538  
*T. hedricki* 2863  
*T. melophagium* 3357  
*T. rangeli* 37, 813, 1181, 2020  
*T. simiae* 1308  
*T. theileri* 1298  
*T. vivax* 1085, 1298, 1300, 1301, 1303, 1305, 1306, 1307, 1308, 1878, 2164, 2466  
**Mastomys natalensis** (see *Praomys natalensis*)  
Mathematics, for biologists, book 2  
**matina, Chaetopsylla**  
Mating disrupters, insect control using 1983  
**matrius, Macrocheles**  
**matsoni, Chirorhynchobia**  
**Mattesia geminata**, in, *Solenopsis* spp., in Brazil 1627  
**mattogrossensis, Anopheles**  
Mattresses, *Dermatophagoides* spp. in, in Uttar Pradesh 2773  
**mauretanicus, Androctonus**  
**Mauritania**  
*Haemolaelaps* spp. in 3422  
Ixodoidea in, viruses in 704  
**Mauritia, Rhodnius prolixus** in, in Venezuela 37  
**Mauritius**  
heartwater in 958  
insect pests in, natural enemies of 2824  
*Linognathus stenopsis* in, on goat 344  
medically-important arthropods in 3141  
*Stomoxys nigra* in 224, 444  
in sugar-cane plantations 3036  
**maurus, Scorpio**  
**maximus, Cubanochirus**  
**maynei, Euroglyphus**  
**mcgregori, Lasioseius**  
Meadows, Culicidae in, in Missouri 3211  
**Meat**  
dichlorvos in, uptake from air of 2267

- Meat** *contd.*  
 naled in, uptake from air of 2266, 2267
- Meat products**, insecticides in, residues of 16
- Mebendazole** (methyl (5-benzoyl-1H-benzimidazol-2-yl)carbamate)  
 in *Tribolium confusum*, effects on *Hymenolepis* of 1625
- Mecoptera**, skeletal structures in 2332
- medanensis**, *Suidasia* (see *S. pontifica*)
- Medicago sativa** (see Lucerne)
- mediocris**, *Ceratozetes*
- meditabunda**, *Myospila*
- mediterranea**, *Wilhelmia* (see *Simulium pseudequinum*)
- mediterraneum**, *Simulium* (see *S. pseudequinum*)
- mediterraneus**, *Carcinus*
- Megabothris advenarius**  
 in USSR 2871, 3389  
 on Rodentia, in Maritime Territory 3389  
 on small mammals, in USSR 2871
- Megabothris advenarius mantchuricus**  
 ssp. nov., description of 567  
 in China 567  
 on *Mus musculus*, in Heilongjiang 567
- Megabothris asio asio**  
 in USA 2304  
 on *Rattus norvegicus*, in Wisconsin 2304
- Megabothris calcarifer**  
 in USA (Alaska) 2322  
 in USSR 2871  
 on *Clethrionomys rutilus*, in Alaska 2322  
 on *Dicrostonyx groenlandicus*, in Alaska 2322  
 on *Microtus oeconomus*, in Alaska 2322  
 on small mammals, in USSR 2871  
*Pasteurella tularensis* in, in Alaska 2322
- Megabothris quirini**  
 in USA (Alaska) 2322  
 on *Microtus pennsylvanicus*, in Alaska 2322  
*Pasteurella tularensis* in, in Alaska 2322
- Megabothris rectangulatus**  
 in USSR 2871, 3184  
 on small mammals in Siberia 3184  
 in USSR 2871
- Megabothris sinensis**  
 sp. nov., description of 567  
 in China 567  
 on *Apodemus speciosus*, in China 567
- Megabothris turbidus**  
*Hepatozoon erhardovae* in, development of 2331  
 hosts of, adaptations to 1042  
 in Czechoslovakia 362  
 in USSR 1042, 1046, 1049  
 in *Citellus citellus* nests, in Czechoslovakia 362
- megacephala**, *Chrysomya*
- megachela**, *Huabangsha*
- Megarhoglossus**, taxonomy of 1750
- Megaselia scalaris**, eclosion pattern in 2722
- megatoma**, *Attagenus* (see *A. unicolor*)
- megistus**, *Panstrongylus*
- megnini**, *Otobius*
- Megoura viciae**  
 control of, insecticides for 2507  
 enzymes in 2507
- melanimon**, *Aedes*
- melanocephala**, *Triatoma*
- melanocephalus**, *Cercyon*
- melanogaster**, *Drosophila*
- melanoon**, *Anopheles*
- melanops**, *Conchapelopia*
- melanura**, *Culiseta*
- melas**, *Anopheles*
- Meleagris gallopavo** (see Turkeys)
- Meles meles**, *Trichodectes melis* on, in Hungary 2012
- Melibiase** (see Galactosidase,  $\alpha$ -)
- Melinda**  
 in New Caledonia 3339  
 in Thailand 662  
 taxonomy of 3339
- Melinis minutiflora**, ticks as affected by 1722
- melis**, *Trichodectes*
- Melittin**  
 in *Apis mellifera* venom, allergenicity of 3381  
 in rat, cardiovascular effects of 1929
- melleus**, *Culicoides*
- mellifera**, *Apis*
- mellonella**, *Galleria*
- Meloinae**, in India 227
- Melomys levipes**, *Guntheria buelowi* on, in Papua New Guinea 3426
- Melophagus antilopes**, in Mongolia 3011
- Melophagus kamtshaticus**  
 sp. nov., description of 446  
 in USSR 446  
 on *Ovis nivicola*, in USSR 446
- Melophagus ovinus**  
 control of 2524  
 insecticides for 320  
 in France 320  
 in Saudi Arabia 2533  
 in USA 2524  
 on sheep  
 in Wyoming 2524  
 mortality of 3357  
 resistance to 666  
 role in back-rolling of 320  
 taxonomy of, characters distinguishing *M. kamtshaticus* and 446  
*Trypanosoma melophagium* in, not pathogenic 3357
- Melopsittacus undulatus** (see Budgerigar)
- Menacanthus cornutus** (see *Gallacanthus cornutus*)
- Menacanthus stramineus**  
 control of, insecticides for 2562, 2564  
 in Poland 2564  
 on fowl, in Poland 2564  
 survival of, away from host 2851
- Meningitis**, in man, caused by arboviruses 1826
- Meningoencephalitis**  
 in man, caused by *Rickettsia slovaca* 1647  
 tick transmission of 924
- Menopon gallinae**  
 carotenoids in, and in fowl 800  
 control of, insecticides for 32, 2562, 2564  
 in India 32  
 in Poland 2564  
 on fowl, in Poland 2564  
 on poultry, in Haryana 32  
 survival of, away from host 2851
- Menthoe** (see Cyclohexanol, 5-methyl-2-(1-methylethyl)-)
- Meoneura**, in Czechoslovakia 3016
- Meoneura freta**, in Czechoslovakia 3016
- Meoneura moravica**  
 sp. nov., description of 3016  
 in Czechoslovakia 3016
- Mepacrine** ( $N^4$ -(6-chloro-2-methoxy-9-acridinyl)- $N^1$ , $N^1$ -diethyl-1,4-pentanediamine)  
 in *Culiseta longiareolata*, chromosome banding pattern produced by 388
- Mepyramine** ( $N$ -[(4-methoxyphenyl)methyl]- $N$ -2-pyridinyl-1,2-ethanediamine)  
 in cattle, suppressing hypersensitivity to *Boophilus microplus* 1395
- merceti**, *Comperia*
- mercurator**, *Aedes*
- Mercury**  
 in *Lucilia caesar*, accumulation of 221  
 in *Lucilia illustris*, accumulation of 221
- Mercury**, (acetato-O)phenyl-, in *Gambusia affinis*, toxicity of 2794
- meridionale**, *Simulium*
- meridionalis**, *Gahrleipia*
- Meriones erythrouros**, *Leishmania major* in, infectivity for *Phlebotomus papatasi* of 2146
- Meriones hurrianae**, *Listrophoroides decoratus* on, in Pakistan 2772
- Meriones libycus**  
*Leptotrombidium rheinwaldi* on, in Morocco 1977
- Ornithodoros alactagalis** in nests of, in Azerbaijan 969
- Meriones meridianus**, *Nosopsyllus laeviceps* on, in USSR 815
- Meriones persicus**, *Yersinia pestis* in, in Iran 364
- Meriones unguiculatus**, *Babesia divergens* in, tick transmission of 277
- Meriones vinogradovi**, *Yersinia pestis* in, in Iran 364
- Meristaspis**, in Philippines 3416
- Mermis**, in, Simuliidae, in Guatemala 144
- Mermithidae**  
 host specificity in 643  
 in  
*Glossina* spp., in Ivory Coast 3320  
 insects  
 book 1134  
 in USSR 1063  
 Simuliidae, in Newfoundland 643  
*Simulium* spp., in Transbaikalia 1067  
*S. erimoense*, in Hokkaido 2665  
 Tabanidae, in France 659
- merus**, *Anopheles*
- mesasiatica**, *Formica*
- Mesobuthus eupeus**  
 pectinate organ in 305  
 taste organs in 3431  
 venom of 307
- Mesocricetus auratus** (see Hamster, golden)
- Mesocricetus brandti**, *Yersinia pestis* in, in Iran 364
- Mesocyclops leuckarti**, in Nigeria 637
- Mesocyclops leuckarti aequatorialis**, in Nigeria 637
- Mesomermis fluminalis**  
 in, Simuliidae, in Newfoundland 643  
 taxonomy of, characters distinguishing *M. trivisi* and 2154
- Mesomermis trivisi**  
 sp. nov., description of (in *Neomesomermis*) 2154  
 in  
*Simulium metallicum*, in Costa Rica 2154  
*S. panamense*, in Costa Rica 2154
- Mesopsylla hebes**, in Mongolia 2583
- Mesostigmata**  
 in British Isles 302  
 on *Bandicota bengalensis*, in Burma 2478  
 on *Rattus*, in Burma 1962  
 on small mammals, in Czechoslovakia 933, 2232  
 on *Suncus murinus*, in Burma 2775
- Mesostoma**  
 biology of 3229  
 preying on  
*Culex tarsalis*, in California 2115  
 Culicidae, in Nigeria 3229
- Mesozoa**, index-catalogue 3148
- messee**, *Anopheles*
- Metabrom** (see Bromophos)
- Metacnephia** (see *Cnephia*)  
 maxillary sensilla in 3309
- Metalistophorus**, taxonomy of,  
*Tamiosochirus* as synonym of 2770
- metallicum**, *Simulium*
- metallicus**, *Aedes*
- Metaparasitylenchus** 3185
- Metarhizium anisopliae**  
 against  
*Culex quinquefasciatus* 2641  
 Culicidae 3266  
 culture methods for 2641  
 in  
*Culex pipiens*, pathogenicity of 596  
*Nosopsyllus fasciatus*, pathogenicity of 1043  
 Tabanidae, in USSR 3336  
*Tabanus autumnalis*  
 development of infection with 1065  
 in Uzbekistan 445  
 paraxial cycle in 860  
 storage of 2641  
 virulence of, relation of polysaccharide degradation, early germination and 596
- Metepa** (1,1',1"-phosphinylidynetris[2-methylaziridine])  
 in *Musca domestica*, effects on ovarian development of 473
- Methane**, sulfinylbis- (see Dimethyl sulfoxide)
- Methanesulfonic acid**, ethyl ester, in *Culex quinquefasciatus*, mutations induced by 595
- Methanimidamide**,  $N'$ -(4-chloro-2-methylphenyl)- $N,N$ -dimethyl- (see Chlordimeform)



- Methanimidamide, N'-(2,4-dimethylphenyl)-N-[[[(2,4-dimethylphenyl)imino]methyl]-N-methyl-** (see Amitraz)
- 6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide** (see Endosulfan)
- 4,7-Methanoisobenzofuran, 1,3,4,5,6,7,8,8-octachloro-1,3,3a,4,7,7a-hexahydro-** (see Isobenzan)
- Methanospirillum**, in *Periplaneta americana*, in gut 29
- 1,3,4-Metheno-1H-cyclobuta[cd]pentalene, 1,1a,2,2,3,3a,4,5,5a,5b,6-dodecachlorooctahydro-** (see Mirex)
- 1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5a,5b,6-decachlorooctahydro-** (see Chlordecone)
- 5,10-Methenyltetrahydrofolate cyclohydrolase** (see Hydrolase, methenyltetrahydrofolate cyclo-)
- Methionine sulfoxide** (see Butanoic acid, 2-amino-4-(methylsulfinyl)-)
- L-Methionine**  
in *Aedes togoi*, utilisation by *Brugia pateri* of 68  
in *Anopheles atroparvus*, utilisation by *Brugia pateri* of 68
- Methocarbamol** (2-hydroxy-3-(2-methoxyphenoxy)propyl carbamate)  
in man, for treating bite by *Latrodectus mactans* 3113
- Methomyl** (methyl N-[[[(methylamino)carbonyl]oxy]ethanimidothioate)  
against  
*Culex pipiens* 761  
*Musca domestica* 761, 3018  
anticholinesterase activity of 761  
in mouse, toxicity of 761  
selective toxicity of 761
- Methoprene** (1-methylethyl (2E,4E)-11-methoxy-3,7,11-trimethyl-2,4-dodecadienoate)  
against  
*Aedes aegypti* 1555  
*Aldrichina grahami* 464  
*Blattella germanica* 1015  
*Boettcherisca peregrina* 464  
*Culex nigripalpus* 371  
*C. pipiens* 1754  
*C. quinquefasciatus*  
in pig waste 374  
in storm drains 2113  
Culicidae 3209  
*Culicoides occidentalis* 2385  
*Lucilia illustris* 464  
*Monomorium pharaonis* 2726  
*Musca domestica* 464, 1015  
*Phormia regina* 464  
*P. terraenovae* 464  
*Psoroptes cuniculi* 2767  
*Sarcophaga crassipalpis* 464  
*S. similis* 464  
formulations of  
baits 2726  
sand, stability of 2112  
in *Aedes aegypti*, effects on vitellogenesis of 3268  
in *Calliphora vicina*  
effects on nucleic acid synthesis of 3354  
effects on protein synthesis on 3354  
in *Culex pipiens*, effects of 1754  
in *Musca domestica*, inducing mixed function oxidase 909  
in *Rhodnius prolixus*, effects on follicle extracellular spaces of 1499  
in synanthropic flies, development inhibition by 464
- Methoxamine** ( $\alpha$ -(1-aminoethyl)-2,5-dimethoxybenzenemethanol)  
in rat, decreasing levarterenol release by *Latrodectus antheratus* venom 3115
- Methoxychlor** (1,1'-(2,2,2-trichloroethylidene)bis[4-methoxybenzene])  
against  
*Simulium arcticum* 1270, 1271, 1272, 1277, 1286, 1292  
*S. decorum* 2980  
*Stomoxys nigra*, on cattle 203  
formulations of 2980  
in Chironomidae, toxicity of 2980
- Methoxychlor contd.**  
in fish  
residues of 1274, 1276  
toxicity of 2980  
in Plecoptera, toxicity of 2980  
in rivers  
distribution of 1272, 1277, 1278  
effects on fish of 1284  
non-target effects of 1279, 1280, 1281, 1282  
monitoring of 1283, 1292  
residues of 1273, 1275, 1276  
in *Salmo gairdneri*, toxicity of 1285  
with malathion  
against  
*Haematobia irritans*, on cattle 1915  
*Musca autumnalis*, on cattle 1915
- Methyl-parathion** (see Parathion-methyl)
- Methyldopa** (3-hydroxy- $\alpha$ -methyl-L-tyrosine)  
against, *Lucilia cuprina* 1382  
in *Lucilia cuprina*, effects on larval cuticle of 911
- Metriocnemus hygropteticus**  
biology of 2168  
competing with, *Psychoda alternata* 2719  
control of, insecticides for 2168, 2719  
in UK 2168, 2719  
in sewage systems, in England 2168, 2719  
rearing of, techniques for 2719
- mexicanum, Simulium**
- Mexico**  
acarologists in, directory 2269  
*Amblyomma cajennense* in, on cattle 1126, 1460  
arthropod pests in 325  
Atopomelidae in 286  
*Boophilus microplus* in 1461  
natural enemies of 1129  
on cattle 1124, 1126, 1460, 1640  
Chernetidae in, on *Neotomodon* 1458  
*Cheyletiella parasitivorax* in  
on guinea-pig 2774  
on rabbit 2774  
*Chirorhynchobia matsoni* in, on Anoura 2243  
*Cochliomyia hominivorax* in 456, 1464, 2429  
*C. macellaria* in 2429  
*Culex pedroi* in 583  
*Dermatophagoides pteronyssinus* in, in house dust 1127  
entomologists in, directory 2269  
*Geomydoecus* spp. in, on *Thomomys* 1171, 1492, 3164  
*G. guadalupensis* in, on *Thomomys* 2849  
Hopleuridae in, on small mammals 1465  
human babesiosis in 3396, 3397  
*Plecia nearctica* in 212  
*Psoroptes cuniculi* in, on rabbit 2774  
*Raillietia auris* in, on cattle 1128  
*Sarcoptes scabiei* in, on man 291  
Scorpiones in 1676  
*Stomoxys calcitrans* in, on cattle 1131  
Suctarsonemus spp. in, on cattle 1462  
*Suidasia pontifica* in, on cattle 1462  
*Triatoma barberi* in, flagellates in 352  
*Xenopsylla cheopis* in, on *Microtus* 1130
- Mice** (see Mouse)
- Michigan**  
*Aedes* spp. in 3231  
*A. vexans* in, nematodes in 378  
*Anopheles quadrimaculatus* in, nematodes in 378  
Culicidae in 1807, 2368  
mosquito control in 3209  
*Scathophaga stercoraria* in  
in cattle dung 2454  
in pastures 2709  
Siphonaptera in 2585  
*Trixacarus caviae* in, on guinea-pig 1979  
*Vespula germanica* in 2460  
*Wyeomyia smithii* in 587
- Micraedes**, taxonomy of 2903
- microcentrus, Apallates** (Hippelates)
- microcentrus, Hippelates** (see Apallates microcentrus)
- microcopa, Macrostylophora**
- Microlichus**, on *Colinus virginianus*, in USA 2001
- Micromonospora chalcone**, in, pigeon, interactions between *Ornithocheyletia halleae* and 922
- Micromys minutus**, Trombiculidae on, in Bulgaria 1664
- microplus, Boophilus**
- Micropotamogale ruwenzorii, Gahrlepiea pyriformis** on, in Zaire 2769
- Micropterna**, preying on, Simuliidae, in Ukraine 1055, 1059
- Microsporidia**  
in  
Culicidae, in USSR 1038  
forest pests, role in population dynamics of 2839  
*Gambusia affinis*, in California 2097  
insects 3136  
medically-important arthropods, bibliography 2517  
Simuliidae  
in Ukraine 1055, 1059  
in USSR 1045  
*Simulium mediterraneum*, in Ukraine 642  
*Solenopsis* spp., in Brazil 1627  
*Tabanus autumnalis*, development of infection with 1020
- Microsporidium chironomi**  
sp. nov., description of 3342  
in, *Chironomus attenuatus*, in Florida 3342
- Microsporidium goeldichironomi**  
sp. nov., description of 3342  
in, *Goeldichironomus holoprasinus*, in Florida 3342
- Microtatiotes** 278, 544, 924, 932, 1680, 2741, 2745, 3137
- Chlamydia** 267
- Cowdria ruminantium** 937, 945, 958, 3060
- Coxiella burnetii** 803, 1688, 2470, 2747, 2748, 3060, 3070, 3399
- Cytoecetes phagocytophila** 1396
- Ehrlichia phagocytophila** 946, 2212
- Eperythrozoon ovis** 2129
- Rickettsia akari** 3070
- R. conori** 965, 2343, 3070
- R. montana** 234, 967, 3065
- R. mooseri** 1043, 2320, 2321, 2479, 3090
- R. prowazekii** 34, 3066, 3182
- R. rhipicephali** 3065
- R. rickettsi** 234, 965, 966, 967, 3065
- R. sibirica** 1688, 2747, 3070, 3399
- R. slovacica** 271, 1647, 3399
- R. tsutsugamushi** 297, 1961, 2801, 2810, 2811, 2812, 3090
- Rochalimella quintana** 34
- Microtenidipes**, in rice-fields, effects of fertilizers on 1624
- microti, Glycyphagus**
- microti, Hyperlaelaps**
- Microtrombicula kikuyuensis**  
sp. nov., description of 1660  
on *Crocodylus occidentalis*, in Africa 1660
- Microtus**  
*Amphipsylla qinghaiensis* on, in China 567  
ectoparasites of, in Scandinavia 2338  
*Peromyscopysylla silvatica* on, in Siberia 1052  
*Uropoda orbicularis* on, in Poland 1655
- Microtus agrestis**, Siphonaptera on, in USSR 1049
- Microtus arvalis**  
*Amphipsylla rossica* on, development of 2579  
*Dermacentor* spp. on, in USSR 496  
*Felicola vulpis* on, in Hungary 2012  
Gamaisoidea on  
in Bulgaria 1659  
in Crimea 993  
*Hoplopleura edentula* on, in USSR 343  
*Ixodes persulcatus* on, no resistance to 1039  
Mesostigmata on, in Czechoslovakia 2232  
*Pasteurella tularensis* in, in USSR 496  
Siphonaptera in nests of, in Czechoslovakia 362  
Siphonaptera on  
in USSR 1049  
removal by host of 2342

- Microtus arvalis** *contd.*  
Trombiculidae on, in Bulgaria 1664
- Microtus brandti**, Siphonaptera on, in Transbaikalia 1026
- Microtus canicaudus**, Siphonaptera on, in Oregon 2586
- Microtus mexicanus**  
*Xenopsylla cheopis* on, in Mexico 1130  
*Yersinia pestis* in, resistance to 1130
- Microtus ochrogaster**, *Myocoptes musculus* on, in South Dakota 511
- Microtus oeconomus**  
*Amalaraeus penicilliger* on, in Alaska 2322  
*Megabothris calcarifer* on, in Alaska 2322  
*Peromyscopsylla ostsibirica* on, in Alaska 2322
- Microtus pennsylvanicus**  
*Babesia microti* in, in North America 3397  
*Dermacentor variabilis* on, in Connecticut 248  
*Megabothris quirini* on, in Alaska 2322  
*Myocoptes musculus* on, in South Dakota 511
- Microtus pinetorum**, *Glycyphagus microti* on, in New York State 1970
- Microtus townsendii**, *Cuterebra grisea* on, effects of 1340
- Migration**, *Simulium damnosum* 1850
- migratoria**, *Locusta miki*, *Tabanus militaris*, *Hydrotaea*
- Milk powder**, diet component for, *Musca domestica* 3356
- Milk production**  
in cattle  
effects of biting flies on 3230  
effects of blood-sucking flies on 1521  
effects of Diptera on 223  
effects of *Stomoxys calcitrans* on 1131
- Mimogaurax lancifer**  
in Puerto Rico 3429  
parasitising, *Latrodectus mactans*, in Puerto Rico 3429
- Mimosa pudica**, insecticidal activity of mucilaginous seeds of 2601
- Mimus polyglottos**, Saint Louis encephalitis, virus in, in Jamaica 845
- minax**, *Butthotus minimus*, *Anopheles minimus*, *Ceratozetella* (see *Ceratozetes minimus*)
- minimus**, *Ceratozetes* (*Ceratozetella*)
- minimus**, *Hydrobaenus* (see *Limnophyes minimus*)
- minimus**, *Limnophyes* (*Hydrobaenus*)
- Mining**, Ixodidae as affected by 3411
- miniopertis**, *Calcarmyobia*
- Miniopterus australis**, *Calcarmyobia australasiae* on, in Queensland 301
- Miniopterus schreibersii**  
*Calcarmyobia miniopertis* on, in Australia 301
- Chiroptella anhuiensis** on, in Anhui 294
- Minnesota**  
*Aedes vexans* in 600  
mosquito control in 3209  
*Vespa germanica* in 2460
- minor**, *Geomydoecus minor*, *Ixodes minor*, *Palaeopsylla minuta*, *Sergentomyia minutus*, *Pteracarus*
- Mirex** (1,1a,2,2,3,3a,4,5,5a,5b,6-dodecachlorooctahydro-1,3,4-metheno-1H-cyclobuta[cd]pentalene)  
against, *Atta* spp. 758
- Mississippi**, *Musca domestica* in, in fowl dung 191
- mississippiensis**, *Culicoides*
- Missouri**  
*Calliphoridae* in 1346  
*Culicidae* in 3211  
*Geomydoecus spickai* in, on *Geomys* 33
- mitchellae**, *Aedes mitchelli*, *Odontacarus*
- Mite**  
clearing and mounting of 1064  
in New Zealand, common and scientific names of 281  
in Nigeria 2003
- Mite** *contd.*  
in Thailand 2809  
in West Malaysia 2803  
in dwellings  
in Argentina 984  
in UK 331  
in house dust  
in Denmark 280  
in different climates 3094  
in Japan 727  
in Peru 921  
in poultry housing, in England 1717  
mounting media for 1149  
on Coleoptera, traps for 3380  
on game animals, in Africa, bibliography 13  
on *Peromyscus maniculatus*, reinfestation by 2002  
on Rodentia  
in Argentina 321  
in Brazil 2491  
on small mammals, in Scandinavia 2338  
on *Sorex*, in Oregon 509  
on *Sylvilagus floridanus*, in Indiana 3145  
pathogens of, bibliography 2517  
predators of, defensive activity against 926  
preparations of, remounting of 2485  
preparing of, critical point drying 2768
- Mite infestations**  
in Asian buffalo 2806, 3417  
in budgerigar 288, 1663  
in camel 3093  
in canary 1413, 2759  
in cat 279, 288, 296, 515, 983, 1414, 1965, 2806, 2837, 3104  
in cattle 245, 521, 1128, 1462, 2525, 2761, 2806, 2837, 3102, 3427  
in dog 12, 1414, 1417, 1665, 1965, 2766, 2806, 3418  
in domestic animals 695, 1333  
in fowl 731, 1493, 1953, 2564, 2764, 2806  
in fur bearers 728, 740  
in goat 988, 1658, 2806, 3102, 3105  
in golden hamster 282, 1656  
in guinea-pig 510, 1978, 1979, 1980, 2774  
in guineafowl 1493  
in horse 3091  
in man 268, 288, 291, 512, 514, 518, 519, 726, 980, 982, 983, 1142, 1147, 1176, 1414, 1415, 1417, 1421, 1666, 1670, 1672, 1673, 1965, 1967, 2006, 2242, 2761, 2762, 2776, 3417, 3421  
in mouse 511  
in pig 985, 999, 1424, 1425, 1661, 1959, 2806  
in pigeon 922  
in poultry 290  
in rabbit 288, 728, 740, 2248, 2687, 2774, 2806  
in sheep 285, 503, 2524, 3101  
in zebu 2538
- mitis**, *Amphipsylla primaris*
- mitis**, *Chrysops*
- Mitonyssus molossinus**  
sp. nov., description of 2238  
in Suriname 2238  
in Venezuela 2238  
on *Molossus*  
in Suriname 2238  
in Venezuela 2238
- Mitonyssus noctilio**  
gen. et sp. nov., description of 2238  
in Bolivia 2238  
in Suriname 2238  
in Venezuela 2238  
on bats 2238
- mixtum**, *Prosimulium*
- MK-933** (see Ivermectin)
- Mockingbird** (see *Mimus polyglottos*)
- modestus**, *Culex*
- moesta**, *Aleochara mokrzycki*, *Ceratophyllus*
- Molasses**  
bait component for  
*Musca domestica* 477  
*M. sorbens* 477  
diet component for, *Musca domestica* 3356
- Mole**, arthropod parasites of, in USSR 1046
- Molecular structure-biological activity relationship**  
alkanamides, insecticidal activity 2263  
DDT analogues, insect neurotoxicity 3123  
fenvalerate isosteres  
insecticidal activity 1985  
mammalian toxicity 1985  
pyrethroids not containing cyclopropane ring, insecticidal activity 1442
- molestus**, *Culex*
- molestus**, *Culicoides*
- molitor**, *Tenebrio*
- Mollicutes** 3081
- Mollusca** 9, 1454, 1543, 2942, 3148, 3296  
*Cionella lubrica* 2727  
*Clausilia* 688  
*Indoplanorbis exustus* 2059  
*Lymanea ovata* 1349  
*L. stagnalis* 1349  
*Nesovitreia hammonis* 2727  
*Succinea elegans* 1349  
*S. putris* 2198
- Molluscs**  
*Bacillus thuringiensis* in, not pathogenic 3296  
common names of, in Australia 1454  
in aquatic habitats, effects of pirimiphos-methyl on 2942  
index-catalogue 3148
- molossi**, *Ophthalmodex*
- molossinus**, *Mitonyssus*
- Molossus**, *Mitonyssus molossinus* on, in South America 2238
- Molossus molossus**  
*Mitonyssus molossinus* on, in South America 2238  
*Ophthalmodex molossi* on, in Suriname 1002
- Monelata parvula**  
in Romania 453  
parasitising, *Lucilia sericata*, in Romania 453
- mongolensis**, *Basilia*
- Mongolia**  
*Cephalopina titillatrix* in, on camel 1996  
*Hippoboscidae* in 3011  
*Hypodermatidae* in 3011  
livestock in, pest control on 1480  
*Nycteribiidae* in 3011  
*Oestroidea* in, on livestock 2691  
Siphonaptera in 2583, 2870
- Moniezia**  
in  
medically-important arthropods, bibliography 2517  
*Scheloribates* spp., in Cuba 738
- Moniezia expansa**, in, *Hypozetes* spp. 2837
- Monkey**  
*Anopheles takasagoensis* on, in Taiwan 2070  
*Atopomelidae* on, in Neotropical region 286
- Monkey, stumped-tailed** (see *Macaca arctoides*)
- Monocrotophos** (dimethyl (E)-1-methyl-3-(methylamino)-3-oxo-1-propenyl phosphate)  
resistance to, in, *Culex pipiens* 2604
- Monolayers** (see Films, unimolecular)
- Monomorium pharaonis** 1479  
control of  
baits for 693, 2726  
growth regulators for 2726  
insecticides for 693, 1140  
low temperatures for 913  
use of pheromones in 229  
in UK 1139
- Monosulfiram** (see Thiodicarbonyl diamide ((H<sub>2</sub>N)C(S))<sub>2</sub>S), tetraethyl-)
- Montana**, *Dermacentor andersoni* in, rickettsiae in 3065
- montana**, *Ascoschoengastia*
- montana**, *Hybomitra*
- montanus**, *Chrysops*
- monticola**, *Simulium*
- Moorland**, Sepsidae in, in England 2456
- moravica**, *Meoneura*
- Moraxella bovis**, in, cattle, flies increasing susceptibility to 2200
- Morellia saishuensis**  
in Japan 1379  
on cattle, in Japan 1379



- Morellia saishuensis** *contd.*  
seasonal abundance of 1379
- mori, Bombyx**
- Mormyrus lacerda**, prey of, effects of  
endosulfan on 3005
- Morocco**  
Coleoptera in, in cattle dung 3386  
*Culicoides* spp. in 3304  
*C. circumscriptus* in 1251  
*Gasterophilus intestinalis* in, on horse 2166  
*G. nasalis* in, on horse 2166  
Hystriochysyllidae in, on small mammals 3183  
Ixodoidea in 3403  
*Leptotrombidium rhainwaldi* in, on *Meriones* 1977  
Scarabaeidae in, in dung 3385  
Simuliidae in 2674  
*Tabanus darimonti* in 3368
- morsitans, Culiceta**
- morsitans, Glossina**
- morsitans, Simulium**
- mosambicensis, Parabuthus**
- moschisuga, Haemaphysalis**
- Moschus berezovskii, Haemaphysalis**  
*moschisuga* on, in Qinghai 265
- Mosquito** (see *Culicidae*)
- Mosquito Beater**, repellent for, *Aedes aegypti* 2347
- Mosquito iridescent virus**, in, *Aedes stramineus*, histopathology of 3288
- Mosquitofish** (see *Gambusia affinis*)
- mossurizensis, Glossina austeni** (see *G. austeni*)
- Motacillidae**  
arthropod parasites of, in Kirghizia 1033  
bacteria in, in Kirghizia 1033
- moubata, Ornithodoros**
- moucheti, Anopheles**
- Moulting hormones**  
*Aedes atropalpus* 125  
*A. epactius* × *A. atropalpus* 2595  
*Calliphora stygia* 889  
*C. vicina* 667  
*Leucophaea maderae* 2546  
*Mamestra brassicae* 667  
*Ornithodoros moubata* 270  
*Periplaneta americana* 787  
*Rhodnius* spp. 3175  
*R. prolixus* 2856  
*Sarcophaga bullata* 2173, 3360  
*S. crassipalpis* 1611  
*Stomoxys calcitrans* 2418  
book 3144  
fluorometric analysis of 753  
production in plant callus cultures of 3130
- Mounting media**, for microarthropods 1149
- Mouse** (see also named species)  
*Aedes triseriatus* on, feeding by 577  
apamin in, effects on central nervous system of 2458  
*Arctia caja* toxin in, toxicity of 232  
*Bacillus sphaericus* in, not pathogenic 1785  
barbatolysin in, not lethal 231  
*Centruroides limpidus* venom in, toxicity of 522  
Connecticut virus in, pathogenicity of 1408  
*Culex pipiens* on, in Honshu 2908  
*Culicoides variipennis* on 628  
DDT in, effects on natural immunity of 1013  
*Dermatophagoides farinae* on, immunization against 1418  
*Forcipomyia taiwana* on 418  
HCH in, effects on natural immunity of 1013  
Hymenoptera venoms in, toxicity of 2205  
*Loxosceles reclusa* venom in, effects of immune serum on responses to 2498  
*Myocoptes musculus* on, reducing sensitivity to oxazolone 295  
*Nosema algerae* in, infectivity of 747  
*Pogonomyrmex barbatus* venom in, toxicity of 231  
Siphonaptera on, feeding apparatus for 1185  
*Theileria parva* in, development of 698
- Mouse** *contd.*  
tick-borne encephalitis, virus in, pathogenicity of 3069  
tick control on, immunization for 3390  
*Trypanosoma cruzi* in, oral infectivity of 2299
- Mouse, deer** (see *Peromyscus maniculatus*)
- Mouse, field** (see *Apodemus sylvaticus*)
- Mouse, western harvest** (see *Reithrodontomys megalotis*)
- Mouse, white-footed** (see *Peromyscus leucopus*)
- Mouse, yellow-necked** (see *Apodemus flavicollis*)
- Mozambique**  
*Glossina* spp. in 1307  
*G. morsitans* in 1861, 1862  
*Ixodes donarthuri* in 1404  
Scorpiones in 1678  
trypanosomiasis in 1307
- mrckiaki, Neopodocinum**
- Mucor circinelloides**, in, *Culicidae*, in USSR 1019
- Mucor fuscus**, antigens of 1669
- Mucor saturninus**, in, *Culicidae*, in USSR 1019
- muehlfeldi, Hybomitra**
- muiscorum, Simulium**
- mularis, Tabanus**
- Mule** (*Equus caballus* × *E. asinus*)  
*Dermacentor marginatus* on, in Italy 3064  
Oestroidea on, book 2691
- Mules' operation** 178, 179, 181
- multidentatus, Atyphloceras**
- multispinosus, Odontopsyllus**
- Muridae, Laelapinae** on, in Western Australia 1653
- muris, Ixodes**
- muris, Liponyssoides**
- Muritrombicula dali**  
gen. et sp. nov., description of 2246  
in China 2246  
on *Rattus coxingi*, in Yunnan 2246
- Murray Valley encephalitis** (see Encephalitis, Murray Valley)
- Murutucu virus**, in, *Culex quinquefasciatus*, infectivity of 1524
- Mus famulus, Huabangsha megachela** on, in China 996
- Mus musculus**  
arthropod parasites of, in Crimea 1060  
Gamaseoidea on, in Bulgaria 1659  
*Leishmania major* in, not infective for  
*Phlebotomus papatasi* 2146  
*Listrophoroides exilis* on, in Pakistan 2772  
*L. pakistanicus* on, in Pakistan 2772  
*Megabothris advenarius* on, in China 567  
*Myocoptes musculus* on, in South Dakota 511  
*Nosopsyllus fasciatus* on, in USSR 2871  
Siphonaptera on, removal by host of 2342  
Trombiculidae on, in Bulgaria 1664  
*Trypanosoma cruzi* in, in Mexico 352
- Mus spretus**, arboviruses in, in Spain 2233
- Musa, Aedes simpsoni** in axils of, in Nigeria 591
- Musca**  
eyes in, pigment migration in 1912  
in Thailand 2805  
in dwellings, in Assam 1595  
*Stephanofilaria assamensis* in, not infective 1891  
wings in, morphometric characters of 1352
- Musca autumnalis**  
biology of 454  
control of 454, 2425, 2525  
behaviour modification for 2447  
biological 1932  
genetic 2447  
growth regulators for 2436, 2829  
insecticides for 1915, 2430, 2433, 2446
- Heterotylenchus autumnalis** in, development of, effects of host diet on 3025  
in Canada 454, 1915  
in France 223  
in German Federal Republic 465  
in USA 454, 908, 1598, 1932, 2430, 2525
- Musca autumnalis** *contd.*  
in USSR 883  
in cattle dung  
effects of cattle diet on 2441  
effects of dung beetles on 2442  
in California 1598  
in USA 1932  
intraspecific competition in 1598  
natural enemies of 454  
on cattle  
in France 223  
in German Federal Republic 465  
in Kentucky 2430  
in Ontario 1915  
in Wyoming 2525  
increasing susceptibility to *Moraxella bovis* 2200  
pathogens of, bibliography 2517  
seasonal abundance of 908  
sugar feeding preferences in 474  
*Thelazia skrjabini* in, in Dagestan 883
- Musca bezzii**  
in Japan 1379  
on cattle, in Japan 1379  
seasonal abundance of 1379
- Musca domestica**  
abstinons in  
mating inhibition by 3324  
receptors for 3325  
activity in, recording of 2798  
aging in 460  
allergens of 2132  
*Arctia caja* toxin in, toxicity of 232  
as component of poultry feed 1623  
attractants for 1073, 1983, 2700, 3371  
attraction of 1360  
to hornet nests 1631  
*Bacillus thuringiensis* exotoxins in, toxicity of 197  
bacteria in, in Brazil 479  
biology of 3350  
 $\alpha$ -bungarotoxin in, binding of 2194  
chemical composition of, effects of diet on 1364  
chemosterilants in, effects on ovarian development of 473  
chromosomes in 1365  
maps of 2202  
control of 199  
antifeedants for 2796  
baits for 528, 1360, 3017  
biological 367, 931, 1895  
fumigants for 3124  
growth regulators for 464, 466, 1015, 1368, 1372, 1449, 1453, 2428, 2436, 3012  
insecticides for 191, 455, 467, 528, 657, 749, 759, 761, 773, 1143, 1144, 1356, 1378, 1435, 1437, 1438, 1439, 1441, 1442, 1443, 1444, 1447, 1450, 1479, 1601, 1893, 2191, 2261, 2264, 2265, 2502, 2508, 2516, 2536, 2703, 3127, 3350, 3351, 3371  
repellents for 3124  
traps for 895, 1360, 1479, 3371  
coumaphos resistance in, role of cuticular wax in 198  
cuticle in, hydrocarbons in 2706  
cytochromes in, variation in 2379  
DDT in, poisoning by 207  
*Dermatophilus congolensis* in, transmission of 777  
development in, effects of temperature on 660, 3356  
diel activity pattern in 2452  
diflubenzuron in, delaying toxic effects of fluorine compounds 1892  
diflubenzuron resistance in, development of 466  
ecdysterone bioassay using 3130  
*Entomophthora apiculata* in, in Nigeria 202  
*E. muscae* in, infectivity of, effects of humidity on 3031  
enzymes in 157, 206, 460, 748, 879, 909, 1213, 1371, 1448, 1606, 2171, 2795, 3343  
EPN in, metabolism of 206  
EPN resistance in, mechanisms of 206  
eyes in 2714, 3041  
isolating of pigment granules from 2448

**Musca domestica** contd.

- fertility in, effects of trichlorphon on 2176
- flight muscles in, age-related changes in 1351
- fluorescence of, relation of linoleic acid and 2172
- follicular atresia in 475
- for converting animal wastes into feedstuffs 2710
- furocoumarins in, effects of 317
- genitalia in, development of 1381
- gynandromorphism in 665
- Habronema muscae* in, in Tamil Nadu 2715
- Hydatigera taeniaeformis* in, persistence of 1900
- in Brazil 479
- in German Democratic Republic 3350, 3351
- in German Federal Republic 1356
- in India 1357, 1595, 2452, 2715
- in Italy 657, 773
- in New Caledonia 3339
- in Nigeria 202
- in Saudi Arabia 2536
- in Turkey 3017
- in UK 467
- in USA 191, 367, 455, 1345, 1631, 3012, 3019, 3371
- in USA (Hawaii) 480
- in abattoirs, in Brazil 479
- in cattle farms, in Florida 367
- in cattle housing
  - in Florida 455
  - in German Federal Republic 1356
- in dwellings
  - in Assam 1595
  - in Orissa 2452
- in fowl dung
  - in Indiana 3012
  - in Mississippi 191
- in pig farms, in Florida 367
- in pig housing
  - in Florida 455
  - in German Democratic Republic 3350, 3351
- in piggeries, in UK 467
- in poultry dung, in Hawaii 480
- in poultry farms, in Turkey 3017
- insect growth regulators in
  - induction of mixed function oxidase by 909
  - transfer to eggs of 1368
- insecticide bioassay using 2267
- insecticide resistance in 1479, 2286
  - in German Democratic Republic 3350
  - mechanisms of 1606
  - monitoring of 1448
  - role of enzymes in 879
- insecticide screening against 1682
- insecticides in
  - acetylcholinesterase inhibition by 748
  - induction of mixed function oxidase by 909
- lipofuscins in 460
- malathion resistance in, role of cuticular wax in 198
- Malpighian tubules in 3029
- marking of, radiophosphorus for 754
- mating in
  - detecting of 754
  - effects of carbon dioxide on 2188
- mating success in, geographic variation in components of 3019
- methoprene in, development inhibition by 464
- mitotic recombination in 665
- mosaicism in 665
- nervous system in 1347
- on cattle, increasing susceptibility to *Moraxella bovis* 2200
- on man, hypersensitivity to 2132
- oocytes in, effects of  $\gamma$ -irradiation on 218
- orientation in 3043, 3044
- ovarian development in 475
  - role of corpus allatum in 1910
- ovaries in, effects of  $\gamma$ -irradiation on 478
- Panagrolaimus migophilus* in, in Karnataka 1357
- parasites of
  - cold storage in host pupae of 472

**Musca domestica** contd.

- parasites of contd.
  - development of resistance to 2410
  - in North Carolina 1345
  - mortality caused by 480
- parasitised by
  - Muscidifurax raptor* 472
  - Nasonia vitripennis* 1608, 2201, 2410
- parathion resistance in, genetics of 1365
- pathogens of, bibliography 2517
- permethrin resistance in
  - development of 1356
  - in German Federal Republic 1356
- phosphogluconate oxidative pathway in 157
- photoreceptors in, sexual dimorphism in 3041
- population dynamics of 1479, 1595
- predators of, capacity for increase of 660
- preyed on by
  - Staphylinidae 1057
  - Stomorphina discolor*, in New Caledonia 3339
- pupae of, size and viability of 1074
- pupariation in
  - effects of caffeine analogues and metabolites on 188
  - effects of fractionated  $\gamma$ -irradiation on 903
- pyrethroids in, poisoning by 207
- Reoviridae in, RNA in 1925
- sex pheromone of
  - receptors for 3325
  - release sites of 874
  - responses to analogues of 1073
- sex ratio in 1599
  - selecting for 1074
- sex-related differences in 1599
- sterilisation of, chemosterilants for 673
- synergists in, effects on mixed function oxidase of 909
- testes in, effects of  $\gamma$ -irradiation on 2720
- tetrachlorvinphos resistance in, development of 1893
- thioacetamide in, development inhibition by 3356
- tricarboxylic acid cycle in 157
- trichlorphon resistance in, development of 2176
- vision in 1621
- visual system in 682
- vitellogenesis in, effects of larval food deficiency on 2184
- xanthene dyes in, toxicity of 3355
- Musca domestica domestica**
  - attractants for 3018
  - control of
    - baits for 477, 3018
    - insecticides for 477, 1430, 3018
  - enzymes in 891, 1904, 2450
  - in Egypt 477
  - in India 3018
  - in cattle farms
    - in Delhi 3018
    - in Egypt 477
  - parasitised by, *Aleochara moesta* 3344
  - preyed on by
    - Aleochara moesta* 3344
    - Philonthus longicornis* 3345
- Musca domestica nebulosa** (see *M. d. domestica*)
- Musca domestica vicina** (see *M. d. domestica*)
- Musca hervei**
  - in Japan 1379
  - on cattle, in Japan 1379
  - seasonal abundance of 1379
- Musca sorbens**
  - control of
    - baits for 477
    - insecticides for 477
  - in Egypt 477
  - in USA (Hawaii) 480
  - in cattle farms, in Egypt 477
  - in poultry dung, in Hawaii 480
- Musca vetustissima**
  - in Australia 1353, 3035
  - in cattle dung, effects of rainfall on 1353
  - population density of, estimating of 3035
  - traps for 3035
- Musca vitripennis**
  - in Bulgaria 902
  - in cattle farms, in Bulgaria 902

**muscaedomesticae, Macrocheles**

- Muscalure** ((Z)-9-tricosene)
  - attractant for, *Musca domestica* 1360, 3018, 3371
  - in *Musca domestica* cuticle 2706
- Musca domestica* responses to 1073
- persistence of 3371
- with 13-methylheptacosane, attractant for, *Musca domestica* 2700
- with 13-methylnonacosane, attractant for, *Musca domestica* 2700
- Muscidae**
  - attractants for 1881
  - book 322
  - cocoons in 2196
  - control of, insecticides for 223
  - helminths in, in Uzbekistan 316
  - in Azerbaijan 899
  - in Canary Islands 1374
  - in China 1618
  - in Nigeria 2003
  - in carrion, in Finland 3364
  - nematodes in, in Dagestan 883
  - on cattle
    - in France 223
    - in Japan 1379
  - preyed on by, *Crabro advena* 1923
  - repellents for 1881
  - taxonomy of 905
- Muscidifurax raptor**
  - cold storage in host pupae of 472
  - in USA 1345
  - parasitising
    - Lucilia cuprina* 480
    - Musca domestica* 472, 480
    - in North Carolina 1345
- Muscimol** (see 3(2H)-Isioxazolone, 5-(aminomethyl)-)
- Muscina**, wings in, morphometric characters of 1352
- Muscoidea**, parasitised by, *Dirhinus* spp., in Indian subregion 3056
- musculi, Myobia**
- musculus, Myocoptes**
- musilator, Culicoides**
- Mustela frenata, Geomydoecus** spp. on 33
- Mustela nivalis**
  - arthropod parasites of, in Poland 323
  - Trichodectes mustelae* on, in Hungary 2012
- Mustela putorius**, arthropod parasites of, in Poland 323
- Mustela sibirica, Chaetopsylla wenxianensis** on, in China 361
- mustelae, Lynxacarus**
- mustelae, Stachiella**
- mustelae, Trichodectes**
- mutans, Knemidokoptes**
- mutata, Cnephia (Stegopterna)**
- mutata, Stegopterna** (see *Cnephia mutata*)
- Mutatoxanthin** (see  $\beta, \beta$ -Carotene-3,3'-diol, 5,8-epoxy-5,8-dihydro-)
- Mutillidae**
  - in British Isles 691
  - parasitising, *Glossina* spp. 437
- MV-678** (see Benzene, 1-(8-methoxy-4,8-dimethylnonyl)-4-(1-methylethyl)-)
- Mycobacterium**, in, *Hyalomma anatolicum*, persistence of 261
- Mycoplasma gallisepticum**
  - in
    - Argas persicus* in Kabardino-Balkaria 1029
    - persistence of 1029
- Mydaea urbana**, in China 1618
- Myianoetus dycei**
  - sp. nov., description of 2659
- in Australia 2659
- in Fiji 2659
- parasitising
  - Culicoides brevitarsis* in Australia 2659
  - in Fiji 2659
- Myiasis**
  - diagnosis of 2453
  - in *Bos taurus*  $\times$  *B. indicus* 663
  - in camel 1996, 2691, 3332
  - in cat 1346
  - in cattle 440, 441, 652, 653, 878, 1341, 1590, 1591, 1889, 2407, 2525, 2689, 2690, 2691, 3329, 3330
  - in dog 457
  - in donkey 2691



- Myiasis contd.**  
 in game animals 1888  
 in goat 457, 2691  
 in horse 442, 2166, 2691  
 in livestock 1480  
 in man 155, 457, 652, 654, 884, 897, 1344, 1375, 2170, 2417, 2453, 2537  
 in mule 2691  
 in pheasant 2186  
 in pig 457  
 in rabbit 1346, 3334  
 in reindeer 2691, 3007, 3008  
 in sheep 16, 161, 162, 163, 164, 165, 166, 169, 170, 171, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 193, 471, 779, 1924, 2174, 2199, 2408, 2524, 2691, 2707, 2718, 2832, 3039, 3331, 3335, 3349  
 in zebu 2538
- Myobia malaysiensis**  
 sp. nov., description of 2483  
 in Malaysia 2483  
 on *Chiropodomys gliroides*, in Malaysia 2483
- Myobia musculi**  
 in USA 511  
 on *Peromyscus maniculatus*, in South Dakota 511
- Myocarditis**, in man, caused by scorpion sting 1007
- Myocoptes musculus**  
 in USA 511  
 on *Microtus ochrogaster*, in South Dakota 511  
 on *Microtus pennsylvanicus*, in South Dakota 511  
 on mouse, reducing sensitivity to oxazolone 295  
 on *Mus musculus*, in South Dakota 511  
 on *Peromyscus maniculatus*, in South Dakota 511
- Myodopsylla insignis**  
 in USA 2582  
 in bat dung, in Massachusetts 2582
- myonyssognathus, Laelaps**
- Myospiia meditabunda**  
 in UK 220  
 in dog dung, in England 220
- Myotis dasycneme, Acanthophthirus polonicus**, in Netherlands 734
- Myotis lucifugus**  
 arthropods in dung of, in Massachusetts 2582  
*Cimex brevis* on, in Ontario 2863  
*Trypanosoma hedricki* in, not infective 2863
- Myotis mystacinus**, Acari on, in Uzbekistan 1071
- Myotis oxygnathus**, Acari on, in Uzbekistan 1071
- Myriophyllum spicatum**  
 biting flies in decomposing piles of, in North Carolina 2723  
*Tilapia zillii* on, and biological control using, in California 2345
- Myrmarchne platypalpus**  
 sp. nov., description of 793  
 in India 793  
 mimicking *Camponotus* 793  
 preying on  
*Periplaneta americana*, in Punjab 793  
 Psychodidae, in Punjab 793
- myrmecobii, Echidnophaga**
- Myrmicinae**, preying on, *Boophilus microplus*, in Mexico 1129
- Myxoma virus**  
 evolution of, effects of vector on 2324  
 in  
*Echidnophaga myrmecobii*, transmission of 46  
 rabbit  
 in Australia 2323  
 in New South Wales 46  
 in UK 2324  
*Spilopsyllus cuniculi*, transmission of 2323, 2324
- Myzus persicae**, control of, insecticides for 2507
- Nairobi sheep disease**  
 virus  
 in  
*Amblyomma variegatum*, in Kenya 1641
- Nairobi sheep disease contd.**  
 virus contd.  
 in contd.  
*Rhipicephalus* spp., in Kenya 1641
- Nairobi sheep disease viruses**, taxonomy of 1950
- Nairovirus**, taxonomy of 1950
- Naja mossambica**, venom of, oral toxicity to insects of 200
- Naled** (1,2-dibromo-2,2-dichloroethyl dimethyl phosphate)  
 against  
*Ctenocephalides felis*, on dog 2028  
*Hypoderma* spp., on cattle 2689  
 in flea collars 2028  
 in foodstuffs, residues of 2266, 2267
- Namibia** (see South-West Africa)
- Nankor** (see Fenchlorphos)
- nanlingense, Leptotrombidium** (Trombiculidus)
- nanlingensis, Trombiculidus** (see *Leptotrombidium nanlingense*)
- Nannosciurus surrutilus**  
*Leptotrombidium imphalum* on, in Philippines 2490  
*Promurichella lukoschusi* on, in Philippines 2480
- nanshanensis, Ceratophyllus**
- nanus, Gnathoncus**
- 2-Naphthalenamine, N-[4-(4-chlorophenyl)-5-imino-1,2,4-thiadiazolidin-3-ylidene]-**  
 against  
*Culex pipiens* 2504  
*Periplaneta americana* 2504
- Naphthalene, dimethyl-, in Blattella germanica** tergal-gland secretion 784
- Naphthalene, trimethyl-, in Blattella germanica** tergal-gland secretion 784
- 1-Naphthalenol, methylcarbamate** (see Carbaryl)
- Naphthenates**, acaricidal activity of 955
- $\beta$ -Naphthoflavone** (see 1*H*-Naphtho[2,1-*b*]pyran-1-one, 3-phenyl-)
- 1*H*-Naphtho[2,1-*b*]pyran-1-one, 3-phenyl-, in Calliphoridae**, induction of microsomal oxidase by 2712
- nasalis, Gasterophilus**
- Nasonia vitripennis**  
 biology of 1895  
 courtship in, role of pheromones in 2461  
 hosts of, development of resistance in 2410  
 in USA 1345  
 mate selection in 1608  
 outbreeding in 1608  
 parasitising  
*Calliphora vicina* 2461  
*Musca domestica* 1608, 2201, 2410  
 and biological control using 1895  
 in North Carolina 1345  
*Phormia terraenovae* 1895  
*Sarcophaga bullata* 208, 1608  
 sex ratio in, adjustment of 208
- nasutus, Rhodnius**
- Natarsia punctata**  
 habitats of 679  
 in Poland 679  
*Stylocystis praecox* in, in Poland 679
- Natural enemies**  
 of arthropods  
*Aedes* spp. 1019, 1757, 2354  
*A. aegypti* 65, 1215, 1247  
*A. albopictus* 1215, 2031  
*A. alcasidi* 1215, 2031  
*A. cantator* 2893  
*A. communis* 88  
*A. detritus* 58, 2937  
*A. dianiaetus* 88  
*A. excrucians* 2590  
*A. flavopictus* 588  
*A. geniculatus* 2590  
*A. japonicus* 2031  
*A. malikuli* 2031  
*A. pionips* 88  
*A. pullatus* 88  
*A. punctor* 88  
*A. taeniorhynchus* 2077  
*A. togoi* 397  
*A. trivittatus* 622  
*Amblyomma americanum* 2209  
*Anobium punctatum* 1657  
*Anopheles* spp. 1019, 2354, 2622  
*A. arabiensis* 767
- Natural enemies contd.**  
 of arthropods contd.  
*Anopheles* contd.  
*A. crucians* 2046  
*A. culicifacies* 609  
*A. earlei* 1197  
*A. gambiae* 767  
*A. maculipennis* 1757, 2590  
*A. punctipennis* 1197, 1531  
*A. walkeri* 1197  
*Armigeres subalbatus* 1215, 2031  
*Bezzia* spp. 2653  
*Boophilus* spp. 1643  
*B. decoloratus* 2468  
*B. microplus* 1129  
*Calliphora vicina* 453  
*Chironomus attenuatus* 3342  
*C. plumosus* 1902  
*Chrysomya chloropyga* 202  
*Chrysops* spp. 3373  
*Conchapelopia melanops* 679  
*Culex* spp. 1019, 2354, 2622  
*C. molestus* 1757  
*C. pipiens* 1890, 2590  
*C. tarsalis* 2115  
*C. tritaeniorhynchus* 99, 1226  
*C. vishnui* 2031  
 Culicidae 1025, 1038, 1537, 1783, 2359, 2931, 3207, 3229, 3254, 3284  
*Culicoides* spp. 3299  
*C. brevitarsis* 2659  
*Depressaria angustati* 2617  
*Elgiva sundewalli* 3373  
*Fucellia capensis* 2439  
*Glaucops hirsutus* 659  
*Glossina* spp. 437  
*G. nigrofusca* 3320  
*G. pallicera* 3320  
*G. palpalis* 3320  
*Goeldichironomus holoprasinus* 3342  
*Haemaphysalis flava* 3085  
*H. longicornis* 3085  
*Haematobia irritans* 2209  
*Haematopota pluvialis* 659  
*Hemipyrellia fernandica* 202  
*Hybomitra* spp. 156  
*H. auripila* 659  
*H. lasiophthalma* 907, 2167  
*H. montana* 659  
*Hydrotaea irritans* 2182  
*Ixodes ricinus* 3391  
*Latroctectus mactans* 3429  
*Leptoconops foulki* 415  
*Lucilia sericata* 453  
*Mansonia* spp. 2354  
 medically-important arthropods 2517  
*Musca autumnalis* 454  
*M. domestica* 202, 1345, 1357, 3339  
*Natarsia punctata* 679  
 Nematocera 468  
*Ornithodoros amblyus* 275  
*Paregle* spp. 453  
*Periplaneta americana* 793  
*Phlebotomus sergenti* 2660  
*Piophilina casei* 453  
*Polygenis tripus* 3185  
*Rhipicephalus* spp. 1643  
*R. appendiculatus* 2468  
*Sepedon fuscipennis* 3372, 3373  
*Sepsis albopunctata* 1914  
*S. nitens* 1914  
*Sigara ornata* 2046  
 Simuliidae 144, 643, 1045, 1055, 1059  
*Simulium* spp. 145, 429, 1067, 1268  
*S. angustitarse* 1054, 1586  
*S. argyreum* 1054  
*S. aureum* 1054  
*S. erimoense* 2665  
*S. mediterraneum* 642  
*S. metallicum* 2154  
*S. ornatum* 1054, 1586  
*S. panamense* 2154  
*S. sanctipauli* 1849  
*S. soubrense* 1849  
*Solenopsis invicta* 1627  
*S. saevissima* 1627  
*Stomoxys calcitrans* 1363  
*Supella longipalpa* 1737  
 Tabanidae 1617, 3040, 3336, 3347  
*Tabanus autumnalis* 445, 1020, 2695  
*T. bromius* 156, 2693  
*T. nigrovittatus* 1603  
*T. rupium* 659

**Natural enemies contd.**

- of arthropods contd.  
*Tetanocera* spp. 3373  
*Tipula pomposa* 2716  
*Tityus serrulatus* 3433  
*Topomyia yanbarensis* 2031  
*Triatoma infestans* 1474  
*T. sordida* 1474  
Triatominae 42  
*Tripteroides bambusa* 2031  
*Uranotaenia* spp. 2031  
Vespiniae 484  
*Vespula* spp. 1631  
in Mauritius 2824  
pesticides in, non-target effects of 1987  
of fish, *Gambusia affinis* 2097  
of molluscs 9  
of nematodes, *Romanomermis culicivorax* 3244  
of plants, *Cicuta douglasii* 2617  
**Nauphoeta cinerea**  
mate selection in 27  
mating in 785  
neurosecretory system in 2289  
ovarian development in 2544  
salivary glands in 333, 2477, 3158  
axons associated with 2543  
seducin in, site of secretion of 3160  
symbiotic bacteria in  
effects of absence of 2545  
transovarial transmission of 2544  
ventilation in, effects of hemolymph pH on 1488  
wing-raising stimulant in 785  
**Nearctic region**, Diptera in, book 2587  
**nearctica, Plecia**  
**Nearctopsylla pfizeri**  
sp. nov., description of 2867  
in USA 2867  
on *Blarina brevicauda*, in Tennessee 2867  
**Nebraska**  
Culicidae in, fungi associated with 2043  
*Geomydoecus nebrathkensis* in, on *Geomys* 33  
**nebrathkensis, Geomydoecus**  
**nebulosus, Musca domestica** (see *M. d. domestica*)  
**Necrosis**  
in *Bos taurus* × *B. indicus*, caused by *Chrysomya bezziana* 663  
in man, caused by *Demodex* 726  
**Neem** (see *Azadirachta indica*)  
**nefarius, Tabanus**  
**neglecta, Malloewia** (*Siphonella*)  
**neglecta, Siphonella** (see *Malloewia neglecta*)  
**neglectus, Rhodnius**  
Neguvon (see *Trichlorophon*)  
**neivai, Rhodnius**  
**Nematocera**  
in Nearctic region, book 2587  
palpal sensilla in 3309  
**Nematoda** 454, 544, 659, 1063, 1067, 1134, 1153, 1783, 2258, 2517, 2665, 2837, 3147, 3185, 3194, 3284  
*Ascaris suum* 1959  
*Ascarops strongylina* 689  
*Breinlia booliati* 59, 1774  
*Brugia* 3225  
*B. malayi* 102, 1774, 2036, 2057, 2140, 2631, 2801, 2885, 2906, 2909  
*B. pahangi* 2036, 2631, 2885  
*B. pateri* 68  
*Chandlerella* 1573  
*C. chitwoodae* 2651  
*Culicimeris schakhovii* 1025  
*Dipetalonema dessetae* 59  
*D. perstans* 861  
*D. viteae* 697  
*Dirofilaria immitis* 378, 600, 1786, 2083  
*D. repens* 101  
*D. ursi* 1296  
*Diximeris peterseni* 1197  
*Dracunculus medinensis* 637  
*Echinonema cinctum* 692  
*Empidomermis riouxi* 58  
*Eufilaria bartlettiae* 1573  
*E. delicata* 1573  
*Gastromermis* 145  
*Gongylonema pulchrum* 316, 689  
*Habronema microstoma* 883  
*H. muscae* 2715

**Nematoda contd.**

- Heterotylenchus autumnalis* 3025  
*Hexameris glossinae* 3320  
*Howardula albopunctata* 1914  
*Hydromermis* 88  
*Isomermis* 144  
*I. lairdi* 145, 434  
*Litomosoides carinii* 121  
*Loa loa* 861  
*Mansonella ozzardi* 1580, 2156, 2386, 2399  
*Mesomermis* 144  
*M. flumenalis* 2154  
*M. travisi* 2154  
*Neoplectana* 2381  
*N. carpocapsae* 209, 1858  
*N. tabanivora* 2693  
*Octomyomermis itascensis* 1902  
*O. muspratti* 3261  
*Onchocerca* 1721, 2392, 2836  
*O. cervicalis* 630, 2650  
*O. gibsoni* 2654  
*O. guttuosa* 128, 585, 1841, 2381  
*O. lienalis* 128, 1852  
*O. volvulus* 5, 147, 637, 638, 870, 1111, 1295, 1580, 1584, 1585, 1847, 1852, 1869, 2151, 2398, 2534, 2671, 3310, 3312, 3318  
*Panagrolaimus migophilus* 1357  
*Parafilaria multipapillosa* 883  
*Pheromermis tabani* 2695  
*P. vernalis* 2695  
*Physoccephalus sexualatus* 316, 689  
*Romanomermis culicivorax* 117, 377, 1227, 1229, 1538, 2089, 2610, 2916, 2932, 2934, 2954, 3206, 3244, 3261  
*R. iyengari* 92  
*R. nielsenii* 1817  
*Setaria yehi* 2083  
*Simondsia paradoxa* 689  
*Spirocerca lupi* 3374  
*Splendofilaria* 1573  
*Stephanofilaria assamensis* 1891  
*Strelkovimeris peterseni* 1531  
*Strongyloides* 1959  
*Thelazia* 2200  
*T. gulosa* 883  
*T. rhodesi* 316  
*T. skrjabini* 883  
*Trichinella spiralis* 746  
*Trichuris* 1959  
*Wuchereria bancrofti* 102, 120, 121, 409, 605, 1154, 1205, 1236, 1777, 1794, 1795, 2048, 2138, 2589, 2599, 2600, 2801, 2888, 3223, 3293  
**Nematodes**  
in  
Culicidae 2837  
review 1783  
insects  
book 1134  
defence mechanisms against 544  
man, book 1153  
medically-important arthropods, bibliography 2517  
*Musca autumnalis* 454  
Muscidae, in Dagestan 883  
index-catalogue 3147  
insect control using  
non-target effects of 2258  
review 1538, 2610  
mosquito control using 3194  
**Neoplectana**  
in  
*Galleria mellonella*, culturing of 2693  
insects, book 1134  
insect control using 2381  
**Neoplectana carpocapsae**  
against  
dung-breeding flies 209  
*Simulium verecundum* 1858  
*S. vittatum* 1858  
**Neoplectana tabanivora**  
sp. nov., description of 2693  
in  
*Haematopota pluvialis*, infectivity of 2693  
*Tabanus bromius*, in Ukraine 2693  
life history of 2693  
**Neocidol** (see *Diazinon*)  
**neocopei, Geomydoecus**  
**Neoculex**, siphon index of, variation with latitude of 77

**neocynipsea, Sepsis**

- Neogregarina**, in, insects 3136  
**Neohaematopinus laevisculus**  
in USSR 2571  
on small mammals, in USSR 2571  
**Neohaematopinus qadrii**  
sp. nov., description of 3165  
in Pakistan 3165  
on *Funambulus pennanti*, in Pakistan 3165  
**Neohaematopinus sciuri**  
in USA 1189  
on *Sciurus carolinensis*, in Tennessee 1189  
seasonal abundance of 1189  
**Neohaematopinus sciuropteri, Rickettsia prowazekii** in, transmission of 3066  
**Neomesomermis flumenalis** (see *Mesomermis flumenalis*)  
**Neomesomermis travisi** (see *Mesomermis travisi*)  
**Neomys**, ectoparasites of, in Scandinavia 2338  
**Neoparasitylenchus** 3185  
**Neoplasms**, in man, caused by *Tunga penetrans* 2865  
**Neopodocinum mrciaki**  
in Poland 729  
on *Clethrionomys glareolus*, in Poland 729  
**Neopsylla acanthina**  
in USSR 3389  
on Rodentia, in Maritime Territory 3389  
**Neopsylla bidentatiformis**  
in USSR 1026  
on *Microtus brandti*, in Transbaikalia 1026  
oviposition in 1026  
**Neopsylla biseta**  
descriptions of 570  
female of 570  
in China 570  
on *Apodemus latronum*, in Yunnan 570  
on *Apodemus sylvaticus*, in Yunnan 570  
on *Neotetracus sinensis*, in Yunnan 570  
**Neopsylla pleskei orientalis**  
in USSR 1026  
on *Microtus brandti*, in Transbaikalia 1026  
oviposition in 1026  
**Neopsylla setosa**  
in Czechoslovakia 362  
in USSR 1060  
in *Citellus citellus* nests, in Czechoslovakia 362  
on *Mus musculus*, in Crimea 1060  
seasonal abundance of 362  
**Neopsylla sondaica**  
control of, insecticides for 565, 1190  
in Indonesia 565, 817, 1190  
on small mammals, in Java 817  
**Neopynamin** (see *Tetramethrin*)  
**Neoschoengastia**, taxonomy of 1968  
**Neostylopyga rhombifolia**, control of, antifeedants for 317, 2796  
**Neotetracus sinensis, Neopsylla biseta** on, in Yunnan 570  
**Neotoma cinerea, Yersinia pestis** in, in California 2319  
**Neotoma floridana, Ixodes woodi** on, in Oklahoma 495  
**Neotoma fuscipes**, Acari in sleeping nests of, in California 930  
**Neotomodon**, Chernetidae on, in Mexico 1458  
**Neotrombicula autumnalis**  
in Belgium 2762  
on man, in Belgium 2762  
**Neotrombicula autumnalis autumnalis**  
biology of 1976  
in German Democratic Republic 1976  
**Neotrombicula japonica**  
in Poland 323  
on *Mustela*, in Poland 323  
**Neotrombicula pomeranzevi**  
mouthparts in, functional morphology of 1674  
on *Clethrionomys rufocanus*, effects on skin of 507  
**Neotrombicula whartoni**  
in USA 2001  
on *Colinus virginianus*, in USA 2001



- Neotrombicula zachvatkini**  
in Bulgaria 1664  
in USSR 1046  
on small mammals, in Bulgaria 1664
- Neotropical region**, Atopomelidae in 286
- Nepa**, preying on, Simuliidae, in Ukraine 1059
- Nepa cinerea**  
biology of 803  
in USSR 1055  
on man, in central Europe 803  
preying on, Simuliidae, in Ukraine 1055
- Nepal**  
*Amphipsylla* spp. in, on Rodentia 3186  
*Protomyobia nepalensis* in, on *Soriculus* 1004
- nepalensis**, *Protomyobia*
- Neral** (see 2,6-Octadienal, 3,7-dimethyl-, (Z)-)
- Nerol** (see 2,6-Octadien-1-ol, 3,7-dimethyl-, (Z)-)
- Nesovitreia hammonis**, preying on, *Cionella lubrica*, and biological control using, in France 2727
- Netherlands**  
*Acanthophthirus polonicus* in, on *Myotis* 734  
*Blattaria* in 1740  
entomology in 1719  
*Haemaphysalis punctata* in, on sheep 1410  
*Hydrotaea irritans* in, bacteria in 890  
*Ixodoidea* in, bibliography 2751  
*Lucilia bufonivora* in, on *Bufo* 222  
mites in, in house dust 3094  
*Ornithonyssus sylviarum* in, in dwellings 1135  
*Parcoblatta* spp. in, in dwellings 1135  
*Pediculus capitis* in, on man 1178  
Tabanidae in 449  
tick-borne diseases in, bibliography 2751  
*Trichodectes canis* in, on man 1135  
*Tunga penetrans* in, on man 2865
- Netherlands Antilles**, *Cochliomyia hominivorax* in 457, 1132
- neurotrichus**, *Eadiea*
- Neurotrichus gibbsii**  
*Eadiea neurotrichus* on  
in British Columbia 2236  
in Washington State 2236  
mites on, in Oregon 289  
prey of 289
- Nevada**  
*Geomydoecus* spp. in, on *Thomomys* 1171  
*G. idahoensis* in, on *Thomomys* 31
- New Brunswick**  
*Coquillettia perturbans* in 2045  
*Ixodoidea* in, on small mammals 720  
Tabanidae in 2197
- New Caledonia**  
*Boophilus microplus* in, on cattle 3068  
Calliphoridae in 3339
- New Hebrides**, *Boophilus microplus* in, on cattle 3061
- New Jersey**  
*Culex salinarius* in 3292  
mosquito control in 3207, 3208
- New Mexico**  
*Amitermes wheeleri* in, in cattle dung 2729  
*Geomydoecus* spp. in, on *Thomomys* 1171  
*G. guadalupensis* in, on *Thomomys* 2849  
*Gnathamitermes tubiformans* in, in cattle dung 2729
- New South Wales**  
Culicidae in, viruses in 2033  
Culicoides brevitaris in, viruses in 862  
*Echidnophaga myrmecobii* in, on rabbit 46  
*Haemaphysalis longicornis* in  
on *Bos indicus* × *B. taurus* 3079  
on cattle 3079  
*Lucilia cuprina* in 668  
on sheep 175, 182, 2718  
*Onthophagus granulatus* in, in cattle dung 2728  
*Psoroptes cuniculi* in, on goat 3105  
*Railletia manfredi* in, on goat 3102, 3105  
sheep in, fly control on 163
- New York State**  
*Aedes atropalpus* in, in tyres 1195  
*Anopheles punctipennis* in, natural enemies of 1531  
*Coquillettia perturbans* in 1528  
*Cosarctoptes scanloni* in  
on *Macaca* 3421  
on man 3421  
*Crabro advena* in 1923  
Culicidae in 2933  
natural enemies of 3254  
viruses in 3246  
Culicoides spp. in, on livestock 417  
*C. variipennis* in 3301  
*C. venustus* in, on cattle 2965  
*Culiseta melanura* in 1528, 1529  
*Dermacentor variabilis* in  
on dog 278  
rickettsiae in 278  
eastern equine encephalitis in 1528, 1529  
*Glycyphagus microti* in, on *Microtus* 1970  
human babesiosis in 3397  
insect collections in 3387  
*Sarcoptes scabiei* in, yeast associated with 2240  
*Sepedon fuscipennis* in, natural enemies of 3372, 3373  
*Sigara ornata* in, natural enemies of 2046  
*Simulium jenningsi* in 1855  
*S. venustum* in 2666  
*S. verecundum* in 2666  
Siphonaptera in, on *Glaucomyia* 1514  
Tabanidae in, natural enemies of 3373  
type specimens in State Museum 2276  
*Wyeomyia smithii* in 839
- New Zealand**  
Ceratopogonidae in 1252  
Chironomidae in 1252  
*Damalinea bovis* in, on cattle 2290, 2291  
*Linognathus vituli* in, on cattle 2290, 2291  
mites in, common and scientific names of 281  
Passeriformes in, arthropod parasites of 801  
*Pediculus capitis* in, on man 559  
Phthiraptera in 1494  
*Rhabdopedilon longicornis* in, on *Cervus* 1172  
*Rhipicephalus sanguineus* in, on imported dog 1409  
*Sarcoptes scabiei* in, on man 518  
Siphonaptera in  
on birds 2312  
on mammals 2312  
*Solenopotes burmeisteri* in, on *Cervus* 1172
- New Zealand Island Territories**  
Ceratopogonidae in 1252  
Chironomidae in 1252  
*Macrocheles* spp. in, in birds' nests 3092
- Newcastle disease**  
virus in  
*Aedes aegypti*, infectivity of 2817  
*A. albopictus*, infectivity of 2817
- Newfoundland**  
insect pests in 782  
Simuliidae in 1854, 3313  
natural enemies of 643  
*Wyeomyia smithii* in 98
- Nexion** (see Bromophos)
- ni**, *Trichoplusia*
- Nicaragua**  
*Anopheles albimanus* in 2127  
malaria in 2127
- Nicrophorus**, sex differences in 1626
- nidi**, *Haemogamasus*
- Niger**  
*Glossina* spp. in 1302  
*G. morsitans* in 1327, 1862  
*G. tachinoides* in 1327, 1861, 1862  
*Onthophagus gazellus* in 3376  
*Simulium* spp. in 1704  
trypanosomiasis in 1302
- Nigeria**  
*Aedes* spp. in 602  
in water containers 2895  
*A. aegypti* in 1194  
on man 1230  
*A. africanus* in 1194, 2918, 2919  
on man 1230
- Nigeria contd.**  
*Aedes* contd.  
*A. luteocephalus* in, on man 1230  
*A. simpsoni* in 591  
*Amblyomma variegatum* in, on cattle 1108, 3415  
*Amyrsidea powelli* in, on guinea fowl 2569  
*Anopheles arabiensis* in 765, 766, 829  
natural enemies of 767  
*A. gambiae* in 765, 766, 829  
natural enemies of 767  
cattle in, arthropod pests of 245  
*Chrysomya chloropyga* in, natural enemies of 202  
*Ctenocephalides canis* in  
on goat 47  
on sheep 47  
*Cuculotogaster occidentalis* in, on guinea fowl 2569  
*Culex* spp. in 602  
Culicidae in, natural enemies of 1113, 3229  
Cyclopoida in 637  
*Demodex* spp. in, on cattle 521  
fowl in, arthropod parasites of 1493  
*Glossina* spp. in 1309, 1322, 1329  
*G. palpalis* in 2157  
*G. tachinoides* in 2157  
guinea fowl in, arthropod parasites of 1493  
*Haemolaelaps* spp. in 3422  
*Hemipyrellia fernandica* in, natural enemies of 202  
insects in  
bibliography 1157  
check-list 1157  
malaria in 829, 3195  
*Musca domestica* in, natural enemies of 202  
onchocerciasis in 2671  
Phthiraptera in, on fowl 2013  
*Simulium* spp. in, on man 2671  
*S. damnosum* in 637  
sleeping sickness in 1309, 1322  
tsetse control in 1097  
vector control in 2003  
*nigerianus*, *Cyclops* (see *Thermocyclops infrequens nigerianus*)  
*nigerianus*, *Thermocyclops infrequens nigerrimus*, *Anopheles nigra*, *Boydella nigra*, *Galumna nigra*, *Schoenbaueria* (see *Simulium nigrum*)  
*nigra*, *Spalangia nigra*, *Stomoxys nigra*, *Trichopria nigrescens*, *Tabanus nigricans*, *Formica nigricornis*, *Gasterophilus nigricornis*, *Hybomitra nigricornis*, *Hybomitra nigripalpus*, *Culex nigripes*, *Chrysomya nigripes*, *Chrysops nigritarse*, *Simulium nigroaenea*, *Spalangia nigrofusca*, *Glossina nigrovittatus*, *Tabanus nigrum*, *Simulium* (*Schoenbaueria*)  
Nimidine (see Benzenamine, 4-chloro-N-1,3-dithietan-2-ylidene-2-methyl-)  
*nipponicus*, *Aedes nitens*, *Anocentor nitens*, *Sepsis nitidifrons*, *Hybomitra nitidus*, *Anopheles nitidus*, *Bradycellus nitidus*, *Polygenis Nitrate*, in *Simulium* breeding water 2666  
Nitrite, in *Simulium* breeding water 2666  
Nitrogen, as protective atmosphere for  $\gamma$ -irradiation of *Glossina* 1100  
*Nitzschia actinastroides*, *Simulium ornatum* feeding on 1293, 1294  
*niveus*, *Dermacentor niveus*, *Culicoides*  
No-Pest Strips (see Dichlorvos)  
*Nocardia farcinica*, in, *Hyalomma anatolicum*, transmission of 502  
*noctiva*, *Calliphora*  
*Noctilio labialis*, *Mitonyssus noctilio* on, in South America 2238

**noctilio, Mitonyssus****Nodamura virus**

assay for 1773

in

*Aedes albopictus*, pathogenicity of 1773*Culex quinquefasciatus*, not pathogenic 1773*Toxorhynchites amboinensis*, pathogenicity of 1773**nodosa, Sarcophaga****noelleri, Simulium****Nonacosane, 11-methyl-,** with 4,5-dimethylheptacosane, and *cis*-2-octyl-3-tridecyloxirane, attractant for, *Musca domestica* 2700**Nonacosane, 13-methyl-,** with muscalure, attractant for, *Musca domestica* 2700**2-Nonacosanone, 3,11-dimethyl-,** *Blattella germanica* responses to 549**2,6-Nonadienoic acid, 9-(3,3-dimethyloxiranyl)-3,7-dimethyl-methyl ester**in *Aedes atropalpus*, inducing ovarian development 2598in *Argas persicus*, accentuating effects of precocenes 1393in *Leucophaea maderae* hemolymph, age-related changes in 1732in *Ornithodoros coriaceus*, accentuating effects of precocenes 1393in *Rhipicephalus sanguineus*, accentuating effects of precocenes 1393**2,6-Nonadienoic acid, 9-(3,3-dimethylthiiranyl)-3,7-dimethyl-,** methyl ester, (2E,6E)-, not active as insect growth regulator 1988**2,6-Nonadienoic acid, 7-ethyl-9-(3-ethyl-3-methyloxiranyl)-3-methyl-methyl ester**in *Aedes aegypti*, effects on vitellogenesis of 3268in *Aedes atropalpus*, inducing ovarian development 2598in *Culex pipiens*, inducing biting behaviour 1770in *Culex quinquefasciatus*, inducing biting behaviour 1770in *Leucophaea maderae* effects on DNA synthesis of 1732

effects on vitellogenin synthesis of 1732

effects on ovarian development of 2558

regulation of ovarian development by 24, 25

in *Rhodnius prolixus*, stimulating protein accumulation in accessory glands 3170in *Sarcophaga bullata*, not overcoming vitellogenesis inhibition by abscisic acid 3360**2,6-Nonadienoic acid, 9-(3-ethyl-3-methyloxiranyl)-3,7-dimethyl-,** methyl ester, in *Aedes atropalpus*, inducing ovarian development 2598**Noradrenaline** (see Levaterenol)**North Carolina***Amblyomma americanum* in 3059

animal waste lagoons in, insect fauna of 1814

Coleoptera in, in poultry dung 226

*Culex quinquefasciatus* in, in pig waste 374*Culicoides* spp. in, in decomposing *Myriophyllum* 2723*Musca domestica* in, natural enemies of 1345*Stomoxys calcitrans* in, in decomposing *Myriophyllum* 2723*Tabanus* spp. in, in decomposing *Myriophyllum* 2723**Northern Territory***Culicoides brevitarsis* in, natural enemies of 2659*Guntheria weedunnarti* in, on *Sminthopsis* 1422**Norway***Dasyphora* spp. in 881*Ixodes uriae* in, viruses in 702*Lucilia* spp. in 2408*Pyrellia* spp. in 881**Norway contd.***Rhipicephalus sanguineus* in, on dog 3400*Sarcoptes scabiei* in, on pig 1424, 1425

Tabanidae in 1907

**Nosema**

in

Culicidae 3136

Tabanidae, in USSR 1020

**Nosema algerae**against, *Anopheles* spp. 3136

in

*Anopheles stephensi*, effects of 3259

Culicidae, effects of 2633

Lepidoptera cell lines, replication of 112

mouse, infectivity of 747

mosquito control using 1539

**Nosopsyllus**, on small mammals, in USSR 3179**Nosopsyllus consimilis**

in USSR 1060

on *Mus musculus*, in Crimea 1060**Nosopsyllus fasciatus***Beauveria bassiana* in, pathogenicity of 1043

control of, inert dusts for 2578

*Hepatozoon erhardovae* in, development of 2331

in Argentina 321

in Czechoslovakia 362

in USA 2302, 2304

in USSR 2871

in *Citellus citellus* nests, in

Czechoslovakia 362

*Metarhizium anisopliae* in, pathogenicity of 1043on *Didelphis virginiana*, in Oregon 2302on *Mus musculus*, in USSR 2871

on nude hosts 2333

on *Rattus norvegicus*, in Wisconsin 2304on *Rattus rattus*, in Argentina 321

on rodents, removal by host of 2342

**Nosopsyllus iranensis**

in Iran 364

*Yersinia pestis* in, in Iran 364**Nosopsyllus laeviceps**

control of, insecticides for 2868

in USSR 815, 2868

olfactory system in, evolution of 3132

on *Meriones meridianus*, in USSR 815

on Rodentia, in Caucasus 2868

population age composition in 815

reproductive rhythm in 815

**Nothobranchius**, preying on, *Anopheles* spp.,

and biological control using 3194

**Notoedres**, taxonomy of, charactersdistinguishing *Trixacarus caviae* and 1978**Notoedres caniculi**

in Indonesia 2806

on rabbit, in Indonesia 2806

**Notoedres cati**

in Indonesia 2806

on cat 2837

in Indonesia 2806

**Notoedres cati caniculi** (see *N. caniculi*)**Notoedres oudemansi**

descriptions of 2239

in Kenya 2239

on *Erinaceus albiventris*, in Kenya 2239**Notoedres ovatus**

sp. nov., description of 283

in Uganda 283

on *Tadarida condylura*, in Uganda 283**Notoedres tadaridae**

in Uganda 283

on *Tadarida condylura*, in Uganda 283on *Tadarida pumila*, in Uganda 283**Notonecta glauca**

biology of 803

on man, in central Europe 803

prey handling time in 1223

preying on

*Aedes aegypti* 1223

Culicidae 1038

**Notonecta maculata**

prey handling time in 1223

preying on, *Aedes aegypti* 1223**Notonectidae**

in animal waste lagoons, effects of organic pollution on 1814

**Notonectidae contd.**

in ponds

effects of aquatic plants on 1243

effects of insect growth regulators on 3024

**notoscriptus, Aedes****Nova Scotia***Coquillettia perturbans* in 2045*Haemaphysalis leporispalustris* in 240*Ixodoidea* in, on small mammals 720**novoniveus, Aedes****novus, Trichoribates****noxius, Centruroides****NRDC 143** (see Permethrin)**NRDC 160** (see Cypermethrin, [1RS-[1 $\alpha$ (S\*),3 $\alpha$ ]]-)**NRDC 161** (see Cyclopropanecarboxylic

acid, 3-(2,2-dibromoethenyl)-2,2-

dimethyl-, cyano(3-

phenoxyphenyl)methyl ester, [1R-

[1 $\alpha$ (S\*),3 $\alpha$ ]]-)**nubeculosus, Culicoides****Nuclease, deoxyribo-,** in *Vespa orientalis*

venom, properties of 3051

**Nuclease, ribo-,** in *Boettcherisca peregrina*

fat-body, activation on pupation of 3363

**Nucleotidase, 5'-,** in *Periplaneta americana*

antennae 3153

**nudisensillum, Leptotrombidium****Numida meleagris** (see Guineafowl)**Numidilipeurus lawrensis tropicalis**

in Nigeria 1493, 2013

nervous system in 1173

on fowl, in Nigeria 1493, 2013

on guinea fowl, in Nigeria 1493

oviducts in, glandular cells in 2011

perioesophageal nephrocytes in 2852

vesicular apparatus in 2568

**Numidilipeurus tropicalis** (see *N. lawrensis tropicalis*)**nuneztovari, Anopheles****Nutgrass, yellow** (see *Cyperus esculentus*)**nuttalli, Laelaps****Nuvan** (see Dichlorvos)**Nyctalus noctula, Acari** on, in Uzbekistan

1071

**Nycteribia quasiocellata**, in Mongolia 3011**Nycteribiidae**

combs in, functions of 2309

in Mongolia 3011

on bats, in Karnataka 2697

**Nycteriglyphinae**, in bat dung, in

Massachusetts 2582

**Nycticorax nycticorax, Ophthalmognathus**

tenorioae on, in Hawaii 2237

**Nyssorhynchus**, chromosomes in 2899**Oak** (see *Quercus*)**obliquus, Onthophagus****obscura, Pherbellia****obscurus, Aphodius****obsoletus, Cercyon****obsoletus, Culicoides****Obuchovia auricoma** (see *Simulium**auricoma*)**occidentalis, Buthus minax****occidentalis, Cuclotogaster****occidentalis, Culicoides****occidentalis, Haemogamasus****occidentalis, Steatonyssus****occitanus, Buthus****Occupational diseases**

allergies to arthropods 2828

hypersensitivity to reared arthropods 319

**Oceania, Sarcophagidae** in 3337**Ochotona***Genoneopsylla angustidigita* on, in China

2864

*G. thysanota* on, in China 2864**Ochotona rufescens, Dermacarus ochotonae**

on, in Pakistan 2772

**Ochotona tibetana***Hystrichopsylla rotundisinuata* on, in

Yunnan 2580

Siphonaptera on, in Yunnan 568

**ochotonae, Dermacarus****ochraceum, Simulium****Ocimum americanum**, insecticidal activity of

mucilaginous seeds of 2601

**Ocimum basilicum**, insecticidal activity of

mucilaginous seeds of 2601

**Ocimum sanctum**

insecticidal activity of extracts of 1561



- Ocimum sanctum** contd.  
insecticidal activity of mucilaginous seeds of 2601
- ocossa, Culex**
- Octacosane, 2-methyl-,** in *Musca domestica* cuticle 2706
- Octacosane, 3-methyl-,** in *Musca domestica* cuticle 2706
- Octacosane, 4-methyl-,** in *Musca domestica* cuticle 2706
- 9,12-Octadecadienoic acid** (9Z,12Z)- (linoleic acid)  
  
in *Culex pipiens* diet, not permitting flight 3214  
in *Musca domestica*, relation of age-associated fluorescence and 2172
- Octadecanoic acid, Ixodes** attachment stimulated by 1405
- 6,9,12-Octadecatrienoic acid, (6Z,9Z,12Z)-,** in *Culex pipiens* diet, permitting flight 3214
- 9,12,15-Octadecatrienoic acid,** (9Z,12Z,15Z)-, in *Culex pipiens* diet, not permitting flight 3214
- 2,6-Octadienal, 3,7-dimethyl-** against, *Musca domestica* 3124  
repellent for, *Musca domestica* 3124  
*Tyrophagus putrescentiae* alarm-pheromone component 3425  
(E)-, in acarid alarm pheromones 1652  
(Z)-, in acarid alarm pheromones 1652
- 2,6-Octadien-1-ol, 3,7-dimethyl-** repellent for, *Aedes aegypti* 2347  
(Z)-, *Periplaneta americana* responses to 2540  
formate, (Z)-  
in acarid alarm pheromones 1652  
*Tyrophagus putrescentiae* alarm-pheromone component 3425
- 6-Octenal, 3,7-dimethyl-,** repellent for, *Aedes aegypti* 2347
- octodecimdentata, Tarsopsylla**
- Octomyomermis itascensis,** in, *Chironomus plumosus*, in Ontario 1902
- Octomyomermis muspratti**  
sex ratio in, effects of diet on 3261  
water quality as affecting 3261
- Octopamine ( $\alpha$ -aminomethyl)-4-** hydroxybenzenemethanol)  
in *Lucilia sericata*, membrane depolarisation caused by 211  
in *Schistocerca gregaria*, chlordimeform mimicking actions of 1431
- oculata, Bembix**
- Odagmia ornata** (see *Simulium ornatum*)
- Odagmia variegata** (see *Simulium variegatum*)
- odibilis, Culicoides**
- Odocoileus hemionus,** arthropod parasites of, in Alberta 556
- Odocoileus virginianus**  
arthropod parasites of, in Alberta 556  
*Demodex* spp. on, effects of 2229  
*Ixodes dammini* on  
in Connecticut 248  
in North America 3397
- Odonata**  
in ponds, effects of aquatic plants on 1243  
in rice-fields, in California 2093  
preyed on by, *Gambusia affinis*, in California 2093  
pyrethroids in, toxicity of 78  
taxonomy of 1719
- Odontacarus mitchelli**  
sp. nov., description of 3426  
in Papua New Guinea 3426  
on *Rattus niobe*, in Papua New Guinea 3426
- Odontacarus yosanoi**  
in China 2760  
on Rodentia, in Kiangsu 2760
- Odontopsyllus**  
distribution of 2335  
on *Sylvilagus* 2335
- Odontopsyllus multispinosus**  
in USA 1155  
on *Sylvilagus floridanus*, in USA 1155
- Odontopsyllus quirosi**  
in France 2335  
in Spain 2335
- Odontopsyllus quirosi** contd.  
on *Oryctolagus cuniculus*, in France 2335
- Oeciacus vicarius**  
control of 44  
Fort Morgan virus in  
in Colorado 2219  
transmission of 563  
in USA 44, 1749, 2219  
on man, effects of bite by 44  
on *Passer domesticus*, in USA 44  
on *Petrochelidon pyrrhonota*  
in Colorado 1749  
in South Dakota 1749  
in USA 44  
Tonate virus in  
in Colorado 1749  
in South Dakota 1749
- Oedemagena tarandi**  
control of, insecticides for 3008  
eggs of, attachment organ of 3333  
in Finland 3007, 3008  
on reindeer, in Finland 3007, 3008
- Oestridae**  
adaptive radiation in 2308  
control of 2691  
insecticides for 1888  
in Nigeria 2003  
on game animals, in South Africa 1888  
on livestock, book 2691
- Oestroidea,** on *Sylvilagus floridanus*, in USA 1155
- Oestromyia,** in Tadzhikistan 154
- Oestromyia leporina**  
in Mongolia 3011  
life history of 443  
on *Praomys natalensis*, effects of 1336
- Oestrus,** in Tadzhikistan 154
- Oestrus oris**  
control of 2524  
insecticides for 3331  
in USA 2524  
in USSR 3331  
larvae of, weight distribution of 1339  
life history of 3331  
on sheep  
development of 3335  
in USSR 3331  
in Wyoming 2524  
pupal development in, effects of temperature on 1594
- Ofunack** (see Phosphorothioic acid, O-(1,6-dihydro-6-oxo-1-phenyl-3-pyridazinyl) O,O-diethyl ester)
- Ohio**  
*Aedes atropalpus* in, in tyres 3251  
Culicidae in, in woodland 1212  
*Dermacentor variabilis* in, rickettsiae in 234  
*Dermatophagoides farinae* in, on man 1420  
Rocky Mountain spotted fever in 234  
*Toxorhynchites rutilus* in, in tyres 1196  
*Trixacarus caviae* in, on guinea-pig 1979
- ohioensis, Atylotus**
- Oil palm (Elaeis guineensis)**
- Oil-palm plantations**  
*Leptotrombidium* spp. in, in West Malaysia 725  
*L. umbricola* in, in West Malaysia 1974  
Trombiculidae in, in West Malaysia 1412, 1973
- Oils**  
against  
*Anopheles* spp. 3194  
Culicidae, in dairy-waste lagoons 2120
- Okhotsk virus,** in man, antibodies to 1947
- Oklahoma**  
*Amblyomma americanum* in 3059  
on *Bos indicus*  $\times$  *B. taurus* 1936  
on cattle 1936  
*Ixodes woodi* in, on *Neotoma* 495  
Ixodidae in, on wildlife 2465  
*Musca autumnalis* in 908  
*Ornithodoros hermsi* in, on *Marmota* 495  
Tabanidae in 3015  
on cattle 1899
- oklahomensis, Geomydoecus**
- Oleo de Palma Rosa,** repellent for, *Panstrongylus megistus*, on rat 39
- olgae, Coptopsylla**
- Oligochaeta**  
in ponds, effects of insect growth regulators on 3024  
preyed on by, *Procladius* spp., in Poland 1917
- olmea, Lutzomyia**
- Oman, Anopheles culicifacies** in 613
- Omethoate (O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] phosphorothioate)**  
resistance to, in, *Culex pipiens* 2604
- Ommochromes,** in insect eyes, isolating of 2448
- Omophron dentatum,** in USA 415
- OMS-1** (see Malathion)
- OMS-43** (see Fenitrothion)
- OMS-1697** (see Methoprene)
- OMS-1804** (see Diflubenzuron)
- OMS-1998** (see Cyclopropanecarboxylic acid, 3-(2,2-dibromoethenyl)-2,2-dimethyl-, cyano(3-phenoxyphenyl)methyl ester, [1R-[1 $\alpha$ (S\*),3 $\alpha$ ]]-)
- Onchocerca**  
in  
*Culicoides marksii*, transmission of 2836  
deer, in German Democratic Republic 1721  
Simuliidae, transmission of 2392
- Onchocerca cervicalis**  
in  
*Culicoides nubeculosus*  
infectivity of 2650  
permitting replication of bluetongue virus 630
- Onchocerca gibsoni,** in, *Forcipomyia townsvillensis*, transmission of 2654
- Onchocerca gutturosa**  
culture methods for 2381  
in  
*Aedes aegypti*, production of 585  
cattle  
distribution pattern of 128  
in Sudan 1841  
*Culicoides kingi*, in Sudan 1841  
*C. nubeculosus*, transmission of 128  
*Simulium griseicollae*, in Sudan 1841
- Onchocerca lienalis**  
in  
cattle, distribution pattern of 128  
*Simulium decorum*, development of 1852  
*S. pictipes*, development of 1852
- Onchocerca volvulus**  
control of, vector control for 5  
development in, effects of temperature on 1585  
forest strain of 147  
in  
man  
in Brazil 870  
in Nigeria 2671  
in Saudi Arabia 2534  
in Sierra Leone 1111  
pathogenicity of, strain differences in 3310  
Simuliidae, transmission of 2398  
*Simulium* spp., transmission of 3310  
*S. albivirgatum*, in Zaïre 1847  
*S. damnosum*, transmission of 147  
*S. decorum*, development of 1852  
*S. exiguum*, transmission of 638  
*S. horacioi*, transmission of 3312  
*S. metallicum*, transmission of 638, 3312  
*S. ochraceum*  
development of 1295  
transmission of 1585, 3312  
uptake from man of 1584, 2151  
*S. sanctipauli*, transmission of 147  
*S. sirbanum*, transmission of 147  
*S. soubrense*, transmission of 147  
*S. yahense*, transmission of 147  
savanna strain of 147  
taxonomy of, characters distinguishing *Mansonella ozzardi* and 1580  
vectors of 637  
feeding sites of 3318
- Onchocerciasis**  
epidemiology of, in West Africa 3310  
trypanosomiasis as affected by 1869
- onderstepoortensis, Culicoides**

- Onesia** (see *Melinda*)
- Oniticellus fulvus**  
in Bulgaria 1385  
in cattle dung, in Bulgaria 1385
- Onitis alexis**  
in Egypt 3374  
in cattle dung, effects on *Musca autumnalis* of 2442  
*Spirocerca lupi* in, in Egypt 3374
- Onitis assamensis**  
sp. nov., description of 2724  
in India 2724  
in rhinoceros dung, in Assam 2724
- Ontario**  
*Chironomus plumosus* in, natural enemies of 1902  
*Cimex brevis* in, on *Myotis* 2863  
*Coquillettidia perturbans* in 2614  
*Culex pipiens* in 2064  
*C. restuans* in 2064  
Culicidae in 2060  
*Culicoides stilobezzioides* in 2651  
*C. trivisi* in 2651  
*Cuterebra fontinella* in, on man 155  
*Damalania bovis* in, on cattle 1742  
*Haematobia irritans* in, on cattle 1915  
*Haematopinus euryternus* in, on cattle 1742  
*H. suis* in, on pig 1743  
*Linognathus vituli* in, on cattle 1742  
*Musca autumnalis* in, on cattle 1915
- Onthophagus**, in dung, in German Federal Republic 3055
- Onthophagus fissicornis**  
in Bulgaria 1385  
in cattle dung, in Bulgaria 1385
- Onthophagus furcatus**  
in Bulgaria 689, 1385  
in cattle dung, in Bulgaria 1385  
*Rodentolepis erinacei* in, in Bulgaria 689
- Onthophagus gagates**, in India 1629
- Onthophagus gazellus**  
biology of 3376  
in Niger 3376  
in cattle dung  
effects on ammonia loss of 2425  
for control of cattle parasites 1932  
for fly control 1932
- Onthophagus granulatus**  
biology of 2728  
in Australia 2728  
in cattle dung, in Australia 2728
- Onthophagus hingstoni**, in India 1629
- Onthophagus kingstoni**  
sp. nov., description of 917  
in Kenya 917  
in buffalo dung, in Kenya 917
- Onthophagus lemur**  
*Gongylonema pulchrum* in, in Bulgaria 689  
in Bulgaria 689
- Onthophagus obliquus shimba**  
ssp. nov., description of 917  
in Kenya 917  
in African elephant dung, in Kenya 917
- Onthophagus ruficapillus**  
in Bulgaria 1385  
in cattle dung, in Bulgaria 1385
- Onthophagus subansiriensis**  
sp. nov., description of 1629  
in India 1629  
in cattle dung, in Arunachal Pradesh 1629
- Onthophagus taurus**  
in cattle dung, effects on *Musca autumnalis* of 2442  
larval behaviour in 2207
- Onthophagus vacca**, larval behaviour in 2207
- onychomydis, Haemogamasus**
- Oochoristica truncata**, vectors of 316
- oophagus, Telenomus**
- Ophthalmodex artibeii**  
gen. et sp. nov., description of 735  
in Suriname 735  
on *Artibeus lituratus*, in Suriname 735
- Ophthalmodex carolliae**  
sp. nov., description of 1002  
in Suriname 1002  
on *Carollia perspicillata*, effects of 1002
- Ophthalmodex molossi**  
sp. nov., description of 1002  
in Suriname 1002
- Ophthalmodex molossi contd.**  
on *Molossus molossus*, in Suriname 1002
- Ophthalmognathus tenorioae**  
sp. nov., description of 2237  
in Rwanda 2237  
in USA (Hawaii) 2237  
on *Nycticorax nycticorax*, in Hawaii 2237
- Ophyra aenesens**  
bacteria in, in Brazil 479  
in Brazil 479  
in abattoirs, in Brazil 479  
sex ratio in 1599  
sex-related differences in 1599
- opimi, Polyplax**
- Opisodasys keeni**  
in USA 2319  
*Yersinia pestis* in, in California 2319
- Opisodasys pseudartomys**  
in USA 1514, 2339  
in *Glaucomys volans* nests, in USA 2339  
on *Glaucomys volans*, avoidance of competition by 1514  
seasonal abundance of 2339
- opisthopus, Culex** (see *C. taeniopus*)
- opok, Aedes**
- Opoka** (see *Silica*)
- Opossum, Virginia** (see *Didelphis virginiana*)
- orbicularis, Uropoda**
- Orchards, Trombiculidae** in, in Kiangsu 2760
- Orchopeas caedens**  
in USA 3182  
on *Glaucomys volans*, in Massachusetts 3182  
*Rickettsia prowazekii* in, transmission of 3182
- Orchopeas howardii**  
in UK 2872  
in USA 1189, 2339  
in *Glaucomys volans* nests, in USA 2339  
on dog, in England 2872  
on *Sciurus carolinensis*, in Tennessee 1189  
*Rickettsia prowazekii* in, not transmitted 3066  
seasonal abundance of 1189, 2339
- Orchopeas howardii howardii**  
in USA 1514  
*Leptomonas* spp. in  
attachment of 2866  
cysts of 2873  
on *Glaucomys volans*, avoidance of competition by 1514
- Oregon**  
*Aedes sierrensis* in 1544  
*Didelphis virginiana* in, ectoparasites of 2302  
*Geomydoecus* spp. in, on *Thomomys* 31  
*Geomylichus perognathi* in, on *Perognathus* 3096  
*Ixodes pacificus* in 269  
spiroplasmas in 3081  
mites in  
on Heteromyidae 2249  
on moles 289  
on *Sorex* 509  
Siphonaptera in, on *Microtus* 2586
- oregonus, Geomydoecus**
- oreophilus, Aedes**
- Oribatei**  
*Anoplocephala* spp. in 686  
in pastures, in Azerbaijan 1051
- Oriboca virus**, in *Culex quinquefasciatus*, infectivity of 1524
- Oriental region**  
*Aedes* spp. in 575  
insect taxonomy in 14
- orientalis, Blatta**
- orientalis, Ctenophthalmus**
- orientalis, Culex**
- orientalis, Neopsylla pleskei**
- orientalis, Vespa**
- orientis, Ctenocephalides**
- Orius insidiosus**  
in USA 2025  
on *Peromyscus leucopus*, in Connecticut 2025
- Orixa japonica**, antifeedant activity of extracts of 317
- orizabae, Geomydoecus**
- ornata, Odagmia** (see *Simulium ornatum*)
- ornata, Sigara**
- ornatipes, Simulium**
- ornatum, Simulium** (*Odagmia*)
- ornatus, Culicoides**
- Ornithocheyletia hallae**, on pigeon, interactions between *Micromonospora chalcone* and 922
- Ornithocoris toledoi**, rearing of, techniques for 1747
- Ornithodoros**  
identifying of 2807  
in Italy 3064  
relapsing fevers, causal agents in, transmission of 3137
- Ornithodoros alactagalis**  
habitats of 970  
hosts of 3408  
in USSR 969, 970, 3408  
in *Meriones libycus* nests, in Azerbaijan 969  
on Amphibia, in Georgia (USSR) 3408  
on Reptilia, in Georgia (USSR) 3408  
population age composition in 969  
seasonal abundance of 969
- Ornithodoros ambulus**  
biology of 275  
descriptions of 275  
Huacho virus in, in Peru 275  
in Peru 275  
on birds, in Peru 275  
on man, effects of bite by 275  
predators of, in Peru 275  
Punta Salinas virus in, in Peru 275
- Ornithodoros canestrinii**  
in Iran 2750  
on goat, in Iran 2750
- Ornithodoros capensis**  
Soldado virus in, in West Africa 704  
complex of, arboviruses in, transmission of 1947  
group of 275
- Ornithodoros colloclaliae**  
identifying of 2807  
in Indonesia 2807
- Ornithodoros concanensis**  
in Canada 954  
on *Falco mexicanus*, in Alberta 954
- Ornithodoros coriaceus**  
*Chlamydia* spp. in  
in California 267  
transmission of 267  
epizootic bovine abortion, virus in, transmission of 1471  
in USA 266, 267  
insect juvenile hormones in, accentuating effects of precocenes 1393  
precocenes in, effects of 1393  
viruses in, in California 266
- Ornithodoros erraticus**  
in Egypt 1950  
Qalyub virus in, in Egypt 1950  
sex pheromone of 3074
- Ornithodoros hermsi**  
in USA 495, 2465  
on *Marmota monax*, in Oklahoma 495  
on wildlife, in Oklahoma 2465
- Ornithodoros kelleyi**  
in Canada 954  
in bat roosts  
in Alberta 954  
in Saskatchewan 954
- Ornithodoros lahorensis**  
biology of 1941  
Congo virus in, in Iran 1637, 2211  
control of  
acaricides for 3410  
fumigants for 3410  
*Coxiella burnetii* in, development of 3070  
Haller's organ in 707  
hosts of 1941  
in Iran 1637, 2211  
in USSR 1941  
olfactory sensilla in 3409  
on sheep, in Iran 2211  
*Rickettsia akari* in, development of 3070  
*R. conori* in, development of 3070  
*R. sibirica* in, development of 3070
- Ornithodoros maritimus**  
Soldado virus in 2213  
virus inhibitor not found in 2213
- Ornithodoros moubata**  
bactericides in 2745



- Ornithodoros moubata* contd.**  
 coxal secretion of, eliciting mating response from *O. erraticus* 3074  
 cuticle in, renewal of 270  
 enzymes in 2745  
 Haller's organ in 707  
 moulting hormones in 270  
 moulting in, effects of population density on 255  
 olfactory sensilla in 3409  
 on rabbit, immune response to 2220
- Ornithodoros moubata porcinus***  
 in Malagasy Republic 3060  
 veterinary importance of 3060
- Ornithodoros papillipes* (see *O. tholozani*)**
- Ornithodoros savignyi***  
 control of, acaricides for 2837  
 Rift Valley fever, virus in, not infective 2139  
 spermine in, in spermatophore 1402
- Ornithodoros tartakovskyi***  
*Dipetalonema viteae* in, transmission of 697  
 in USSR 1688  
 moulting in, effects of population density on 255  
 Spirochaetales in, in Kirgizia 1688
- Ornithodoros tholozani***  
 control of, acaricides for 1087  
 coxal secretion of, eliciting mating response from *O. erraticus* 3074  
 in USSR 1071, 1688  
 moulting in, effects of population density on 255  
 olfactory sensilla in 3409  
 on bat, in Uzbekistan 1071  
 oviposition in, effects of population density on 1399  
 Spirochaetales in, in Kirgizia 1688
- Ornithodoros verrucosus***  
 biology of 1941  
 hosts of 1941, 3408  
 in USSR 1941, 3408  
 on Amphibia, in Georgia (USSR) 3408  
 on Reptilia, in Georgia (USSR) 3408
- Ornithogastia***  
 in Papua New Guinea 1968  
 taxonomy of 1968
- Ornithoica turdi***  
 in USSR 1021  
 on birds, in USSR 1021
- Ornithomya*, on *Agelaius phoeniceus*, in North America 4**
- Ornithomya avicularia***  
 in USSR 1021  
 on birds, in USSR 1021
- Ornithomya chloropus***  
 in USSR 1021  
 on birds, in USSR 1021
- Ornithomya fringillina***  
 in Czechoslovakia 190  
 in USSR 1021  
 on birds, in USSR 1021
- Ornithonyssus bacoti***  
 gnathosoma in, functional morphology of 929  
 in Argentina 984  
 in Burma 1962  
 in dwellings, in Argentina 984  
*Litomosoides carinii* in, pathogenicity of 121  
 on *Rattus*, in Burma 1962
- Ornithonyssus bursa***  
 in Argentina 984  
 in Nigeria 1493  
 in dwellings, in Argentina 984  
 on fowl, in Nigeria 1493  
 on guinea fowl, in Nigeria 1493
- Ornithonyssus sylviarum***  
 carbaryl resistance in, in Israel 290  
 control of, acaricides for 290, 1953, 2764  
 in Israel 290  
 in Netherlands 1135  
 in Pakistan 731  
 in USA 1672, 1953  
 in dwellings, in Netherlands 1135  
 malathion resistance in, in Israel 290  
 microwave irradiation as affecting 2765  
 on fowl  
 acquired immunity to 2764  
 in California 1953  
 in Pakistan 731  
 on man, dermatitis caused by 1672
- Ornithonyssus sylviarum* contd.**  
 on poultry, in Israel 290  
 temperature as affecting 2765
- Oropouche virus**  
 in  
*Culicoides paraensis*  
 in Brazil 3224  
 transmission of 2658  
 man, in Brazil 2655, 2656, 2657, 3224
- Oropsylla silantiewi***  
 in USSR 1688  
*Yersinia pestis* in, in Kirgizia 1688
- Orthellia cornicina***, taxonomy of, *Orthellia viridis* as synonym of 905
- Orthellia viridis***, taxonomy of, synonym of *O. cornicina* 905
- Orthene** (see Acephate)
- orthocnemis, Sepsis**
- Orthogeomys grandis*, *Pulex sinoculus* on 2313**
- Orthohalarachne diminuta***  
 control of, acaricides for 1423  
 descriptions of 1423  
 in Japan 1423  
 on *Zalophus californianus*, in Japanese zoo 1423
- Orthopodomys***  
 in Canada 1533  
 in Quebec 2881
- Orthopodomys alba***  
 in USA 1821  
 in tree holes, in West Virginia 1821
- Orthoptera**  
 diapause in, review 1191  
 helminths in, in Uzbekistan 316  
 on man, hypersensitivity to 319
- Orthopteroida**, in Bermuda, book 792
- Orthorrhapha**, in Nearctic region, book 2587
- Oryctolagus cuniculus***  
 ectoparasites of, seasonal incidence of 2869  
 Ixodoidea on, in Spain 2869  
 Siphonaptera on, in France 2335  
*Spilopsyllus cuniculi* on  
 in Portugal 2336  
 in Spain 2869  
*Xenopsylla cunicularis* on, in Portugal 2336
- Oryza sativa* (see Rice)**
- Oryzomys bauri*, *Ixodes galapagoensis* on, in Galapagos Islands 1949**
- Oryzomys palustris*, Hoplopleuridae on, in Mexico 1465**
- Osteitis**, in man, caused by *Macrothylacia rubi* 690
- ostsibirica*, *Peromyscopsylla oswaldoi*, *Anopheles***
- Otitis**, in cattle, caused by *Railletia auris* 1128
- Otobius megnini***  
 control of 2524, 2525  
 in Malagasy Republic 3060  
 in USA 2524, 2525  
 life-cycle of 2837  
 on cattle, in Wyoming 2525  
 on sheep, in Wyoming 2524  
 veterinary importance of 3060
- Otodectes**  
 control of  
 acaricide applicators for 740  
 acaricides for 728  
 on fur bearers 740
- Otodectes cynotis***  
 control of, acaricides for 728  
 feeding in 296  
 in Italy 12  
 on cat, hypersensitivity to 296  
 on dog, in Italy 12
- otophila*, *Haemaphysalis* (see *H. parva*)**
- otsurui*, *Tabanus***
- Ouabain**  
 in *Amblyomma hebraeum*, ATPase inhibition by 2740  
 in *Periplaneta americana*, effects on mechanoreceptors of 1735  
 in rat, causing release of acetylcholine from brain 1677  
 in *Simulium ornaticipes*, effects on water relations of 2393
- oudemansi*, *Notoedres oudemansi*, *Walchiella ovatus*, *Aleuroglyphus***
- ovatus*, *Notoedres ovazzae*, *Simulium ovinus*, *Melophagus***
- Oviposition attractants**  
 for *Aedes aegypti*  
 aquatic-plant extracts as 2355  
 peptides as 1759  
 for *Culex molestus*, peptides as 1759  
 for *Culiseta longiareolata* 2364  
 for *Lucilia cuprina*, bacteria as 174
- Oviposition deterrents**  
 for *Aedes aegypti*  
 aquatic-plant extracts as 2355  
 plant extracts as 2618  
 for Culicidae 1209  
 for *Lucilia cuprina* 166
- Ovis aries* (see Sheep)**
- ovis*, *Bovicola* (see *Damalinia ovis*)**
- ovis*, *Damalinia* (*Bovicola*)**
- Ovis nivicola*, *Melophagus kamtshaticus* on, in USSR 446**
- ovis*, *Oestrus***
- Ovis orientalis*, Ixodidae on, in Iran 2750**
- ovis*, *Psoroptes***
- Owl, short-eared (see *Asio flammeus*)**
- owyheensis*, *Culicoides***
- 6-Oxabicyclo[3.2.1]octan-7-one, 8-(1-methylethyl)-, against, *Musca domestica* 2261**
- 1,3,4-Oxadiazol-2(3H)-one, 5-methoxy-3-(2-methoxyphenyl)-, against**  
*Atta* spp. 758  
*Blattella germanica* 758  
 in fish, toxicity of 758  
 in mammals, toxicity of 758  
 properties of 758
- Oxaloacetic acid (see Butanedioic acid, oxo-)**
- Oxamate (repellent) (see Acetic acid, (diethylamino)oxo-, C<sub>6</sub>-C<sub>8</sub> alkyl esters)**
- Oxazolidine, 3-acetyl-2-(2,6-dimethyl-5-heptenyl)-, repellent for, Simuliidae, on cattle 1288**
- Oxazolone (sensitizing agent) (see 5(4H)-Oxazolone, 4-(ethoxymethylene)-2-phenyl-)**
- 5(4H)-Oxazolone, 4-(ethoxymethylene)-2-phenyl-, in mouse, *Myocoptes musculus* reducing sensitivity to 295**
- Oxidase**  
 in Calliphoridae, induction of 2712  
 pyrethroid degradation by 1445  
 mixed function  
 in *Musca domestica*  
 EPN degradation by 206  
 inhibited by piperonyl butoxide 909  
 insecticide induction of 909  
 not involved in insecticide resistance 1606
- Oxidase, cytochrome**  
 in *Babesia ovis* sporozoites 3077  
 in *Stomoxys calcitrans* 3030  
 in *Stomoxys calcitrans* larvae, activity pattern of 2418  
 in *Theileria annulata* sporozoites 3077
- Oxidase, D-amino acid, in *Aldrichina grahmi* microbodies 3366**
- Oxidase, phenol (see Oxygenase, monophenol mono-)**
- Oxidase, urate, in *Aldrichina grahmi* microbodies 3366**
- Oxirane, 2,2-dimethyl-3-[3-methyl-6-(4-propylphenoxy)-3-hexenyl]-, against, *Anopheles quadrimaculatus* 1762**
- Oxirane, 3-[6-(3-ethylphenoxy)-3-methyl-3-hexenyl]-2,2-dimethyl-, against**  
*Aedes taeniorhynchus* 1762  
*Anopheles albimanus* 1762  
*A. quadrimaculatus* 1762
- Oxirane, 3-[5-(4-ethylphenoxy)-3-methyl-3-pentenyl]-2,2-dimethyl-(E)-, against, Chironomidae 1366, 2412**  
 in ponds, non-target effects of 2412
- Oxirane, 2-octyl-3-tridecyl-, cis-, with 4,5-dimethylheptacosane, and 11-methylnonacosane, attractant for, *Musca domestica* 2700**
- Oxpecker, red-billed (see *Buphagus erythrorhynchus*)**
- oxygaster*, *Trichopria***

- Oxygenase, monophenol mono-  
in *Calliphora vicina* larval cuticle,  
properties of 2189  
in *Musca domestica*  
inhibition of aldrin epoxidase by 1371  
purification of 2450  
subunit structure of 1904  
in *Musca domestica* larvae, properties of  
891
- Oxytelus*, in dung, in USSR 1057
- Oxytetracycline, in *Periplaneta americana*,  
reducing susceptibility to carbaryl 2505
- Pachycrepoides vindemiae*  
in USA 1345  
parasitising, *Musca domestica*, in North  
Carolina 1345
- pacifica*, *Hoplopleura*
- pacificus*, *Ixodes*
- pacificus*, *Porrius*
- Pacui virus, in, *Lutzomyia longipalpis*,  
replication of 635
- Paecilomyces varioti*  
in  
Culicidae, in Ukraine 1025, 1757  
*Tabanus autumnalis*, in Uzbekistan  
3336
- Paederus sabaeus*  
control of 3049  
in Tanzania 3049  
on man, dermatitis caused by 3049
- Paguma larvata*, *Herpetacarus pagumae* on,  
in Fujian 2231
- pagumae*, *Herpetacarus*
- pahangensis*, *Radfordia*
- Pain  
in man  
caused by *Anastrepha* 1344  
caused by insect stings 1630  
caused by *Latoia vivida* 485  
caused by *Oeciacus vicarius* 44
- pajoti*, *Lutzomyia yuilli*
- Pakistan  
*Amphipsylla* spp. in, on Rodentia 3186  
*Anopheles* spp. in 1775  
*A. culicifacies* in 81, 617, 2938  
*A. stephensi* in 617, 2915  
*Argas persicus* in, bacteria in 247  
Crimean hemorrhagic fever in 1945  
fur mites in 2772  
malaria in 617  
*Neohaematopinus qadrii* in, on  
*Funambulus* 3165  
*Ornithonyssus sylvianus* in, on fowl 731
- pakistanicus*, *Listrophoroides*
- Palaeartic region, Tabaninae in 3340
- Palaeopsylla minor minor*  
*Leptomonas* spp. in  
attachment of 2866  
cysts of 2873
- Palaeopsylla soricis*  
in Hungary 2334  
in USSR 1046
- Palaeopsylla soricis starki*  
in Hungary 2027  
on *Apodemus flavicollis*, in Hungary  
2027  
on *Sorex araneus*, in Hungary 2027
- Palamnaeus* (see *Heterometrus*)
- Palamnaeus bengalensis* (see *Heterometrus*  
*bengalensis*)
- pallens*, *Culex pipiens*
- pallens*, *Haematopota*
- pallens*, *Rhodnius*
- pallens*, *Glossina*
- pallidipennis*, *Triatoma*
- pallidipes*, *Glossina*
- pallidum*, *Leptotrombidium*
- pallidus*, *Latrodectus*
- pallidus*, *Tabanus golovi*
- pallipes*, *Hippelates* (see *Liohippелates*  
*pallipes*)
- pallipes*, *Liohippелates* (*Hippelates*)
- Palm, corozo (see *Schoelea zonensis*)
- Palm trees  
Chagas' disease and 2020  
*Rhodnius pallens* in, in Panama 2576  
*R. prolixus* in  
in Panama 2020  
in Venezuela 37
- palmatus*, *Scorpio maurus*
- palmerae*, *Culicoides*
- palpalis*, *Glossina*
- pampanai*, *Anopheles*
- Panagrolaimus migophilus*  
sp. nov., description of 1357  
in, *Musca domestica*, in Karnataka 1357
- Panallius*, on Rodentia, in Argentina 357
- Panama  
*Aedeomyia squamipennis* in, viruses in  
2629  
*Coendalges panamensis* in, on *Coendou*  
732  
*Culex adamesi* in 584  
*C. ocosa* in, on man 2923  
*C. panocossa* in, on man 2923  
*C. pedroi* in 583  
*C. simulator* in 109  
Culicidae in 2078  
on man 2283  
Phlebotominae in 2150  
on man 2283  
*Rhodnius pallescens* in, on man 2576  
*R. prolixus* in 2020
- panamense*, *Simulium*
- panamensis*, *Coendalges*
- panamensis*, *Lutzomyia*
- pancensis*, *Culicoides*
- Pandanus*, Culicidae in axils of, in tropical  
Africa 54
- Pandanus rabaiensis*, Culicidae in axils of, in  
Kenya 54
- Pandinus gregoryi*, activity in, rhythm of  
315
- panocossa*, *Culex*
- Panstrongylus lignarius*  
descriptions of 2577  
in Venezuela 2577
- Panstrongylus lutzii*, in Brazil 811
- Panstrongylus megistus*  
activity in, rhythm of 315  
control of  
flushing agents for 1507  
insecticides for 1507, 2018  
repellents for 39  
domiciliary in 1744  
heart in 2297  
in Brazil 42, 811, 812, 1744, 3167  
in dwellings, in Brazil 812  
Malpighian tubules in 2022  
nuclear fusion in 1503  
precocenes in, effects of 350  
preyed on by, Araneae, in Brazil 42  
*Trypanosoma cruzi* in, infectivity of 806  
virus-like particles in, pathogenicity of  
808
- paoshanensis*, *Macrostylophora*
- papatasi*, *Phlebotomus*
- Paper wasp (see *Polistes*)
- papillipes*, *Ornithodoros* (see *O. tholozani*)
- Papio anubis*, chikungunya virus in, in  
Central African Republic 2066
- Papua New Guinea  
*Anopheles* spp. in, on man 1771  
Culicidae in 833  
*Guntheria* spp. in 1968  
*G. serrata* in, on *Rattus* 1005  
*Laelaps* spp. in, on *Pogonomys* 1416  
*Ornithogastia* spp. in 1968  
Trombiculidae in, on small mammals  
3426  
*Whartonia kulumadouensis* in, on  
*Dobsonia* 2235
- Paraboopia*, on Marsupialia, in Western  
Australia 2565
- Parabuthus*, in Zimbabwe 1428
- Parabuthus mosambicensis*  
in Zimbabwe 1428  
on man, stings by 1428
- Parabuthus transvaalicus*  
in Zimbabwe 1428  
on man, stings by 1428
- Parabuthus truculentus*  
in Zimbabwe 1428  
on man, stings by 1428
- Parabyssodon transiens* (see *Simulium*  
*transiens*)
- Paraceroglyphus*, on *Xenopsylla difficilis*, in  
Kenya 1513
- paradoxa*, *Polyplax*
- paraensis*, *Culicoides*
- paraensis*, *Lutzomyia* (*Psychodopygus*)
- paraensis*, *Psychodopygus* (see *Lutzomyia*  
*paraensis*)
- paraensis*, *Rhodnius*
- Parafilaria multipapillosa*, in, Muscidae, in  
Dagestan 883
- Paraguay, Triatominae in, flagellates in  
3174
- parallellus*, *Tricholipeurus*
- Paralysis (see also Tick paralysis)  
in *Lucilia sericata*, caused by *Risella* 17  
oil 1350
- Paramar (see Parathion)
- parameces*, *Laelaps*
- paramorsitans*, *Simulium*
- Paraaxon (diethyl 4-nitrophenyl phosphate)  
in *Triatoma infestans*  
esterase inhibition by 1745  
metabolism of 3169
- Paraperiglischrus*, on bat, in Uzbekistan  
1071
- Paraperiglischrus hipposideros*  
descriptions of 505, 3416  
in Japan 505  
in Philippines 3416  
on *Hipposideros turpis*, in Japan 505  
taxonomy of 505
- Paraperiglischrus rhinolophinus*  
in Japan 505  
in Philippines 3416  
on *Rhinolophus cornutus*, in Japan 505  
on *Rhinolophus ferrumequinum*, in Japan  
505  
taxonomy of 505
- Paraperiglischrus sternalis*  
descriptions of 505  
in Japan 505  
on *Rhinolophus ferrumequinum*, in Japan  
505
- Parapoynx badiusalis*, in USA 2723
- parargyreatum*, *Simulium*
- Parasarcophaga* (see *Sarcophaga*)
- Parasarcophaga argyrostoma* (see  
*Sarcophaga argyrostoma*)
- Parasarcophaga crassipalpis* (see *Sarcophaga*  
*crassipalpis*)
- Parasarcophaga hirtipes* (see *Sarcophaga*  
*hirtipes*)
- Parasarcophaga ruficornis* (see *Sarcophaga*  
*ruficornis*)
- Parasarcophaga similis* (see *Sarcophaga*  
*similis*)
- Parasite-host interactions  
development of resistance 2410  
effects on hosts of substances injected by  
ovipositing parasites 1724  
factors affecting relations between  
mammals and arthropod parasites  
327  
functional responses of parasitoids that  
imperfectly avoid superparasitism  
2201
- Parasites  
evolutionary biology of, book 536  
population dynamics of 1339
- Parasitinae  
in British Isles 1960  
taxonomy of 1960
- parasitivorax*, *Cheyletiella*
- Parasitus*  
gnathosoma in, functional morphology of  
929  
in rodent nests, in Transbaikalia 1032
- Parasitus coleoptratorum*  
diapause in 926  
intraspecific competition in 930  
preying on, *Macrocheles glaber* 930
- Paratanytarsus*  
control of, insecticides for 2713  
in water supply, in England 2713
- Parathelohania*, in, *Anopheles earlei*, in  
Quebec 1197
- Parathelohania legeri*, in, *Anopheles* spp., in  
Ukraine 1025
- Parathelohania obesa*, in, *Aedes* spp., in  
Ukraine 1025
- Parathion (*O,O*-diethyl *O*-(4-nitrophenyl)  
phosphorothioate)  
against, *Boophilus microplus*, on cattle  
2746  
formulations of, microencapsulated 1733  
in *Triatoma infestans*  
esterase inhibition by 1745  
metabolism of 3169  
resistance to, in  
*Culex pipiens* 2604  
*C. quinquefasciatus* 1221



- Parathion contd.**  
 resistance to, in *contd.*  
*Culicidae*, in Utah 3212  
*Musca domestica*, genetics of 1365
- Parathion-methyl** (*O,O*-dimethyl *O*-(4-nitrophenyl) phosphorothioate)  
 formulations of, microencapsulated 1733  
 in *Periplaneta americana*  
 effects of carbon dioxide on susceptibility to 2848  
 effects of crowding on susceptibility to 2848  
 resistance to, in  
*Culex pipiens* 2604  
*C. quinquefasciatus* 1221  
 with trichlorophen, against, *Culex pipiens* 2604
- Paravespula vulgaris** (see *Vespula vulgaris*)
- Parcoblatta**, in dwellings, in Netherlands 1135
- Paragle**, parasitised by, *Trichopria major*, in Romania 453
- parensis**, *Anopheles*
- pari**, *Ixodes*
- Parietaria officinalis**, human hypersensitivity to 989
- paripes**, *Glyptotendipes*
- Paris green**, against, *Anopheles* spp. 3194
- particeps**, *Apallates* (*Hippelates*)
- particeps**, *Culiseta*
- particeps**, *Hippelates* (see *Apallates particeps*)
- Particleboard**, insecticides in, persistence of 2039
- Partridge** (see also named species)  
*Haemaphysalis punctata* on, in Italy 3064
- Partridge, red** (see *Alectoris rufa*)
- parumapertus**, *Dermacentor*
- parva**, *Haemaphysalis*
- Parvoviridae**  
 in  
*Aedes aegypti*  
 effects of 105  
 storage of 3192  
*Periplaneta* spp., infectivity of 22  
*P. fuliginosa*, characterisation of 22, 547
- parvula**, *Monelata* (*Trichopria*)
- parvula**, *Trichopria* (see *Monelata parvula*)
- Passer domesticus**  
*Boydaia nigra* on, in Hawaii 2237  
*Ceratophyllus gallinae* on, in Scotland 2341  
 Fort Morgan virus in, in Colorado 2219  
*Lyctocoris campestris* in nests of, in Switzerland 564  
*Oeciacus vicarius* on, in USA 44  
 Saint Louis encephalitis, virus in, in Indiana 1791  
 Tonate virus in, antibodies to 1749
- Passeriformes**, arthropod parasites of, in New Zealand 801
- Pasteurella tularensis** (see also *Tularemia*)  
 foci of 496  
 in  
*Amalareus penicilliger*, in Alaska 2322  
*Culicidae*, transmission of 3215  
*Dermacentor* spp., transmission of 496  
*D. reticulatus*, in Yugoslavia 237  
*Euhoplopsyllus glacialis*, in Alaska 2322  
 man, in USSR 1380  
*Megabothris calcarifer*, in Alaska 2322  
*M. quirini*, in Alaska 2322  
*Microtus arvalis*, in USSR 496  
*Peromyscopsylla ostsibirica*, in Alaska 2322  
*Tabanus* spp., transmission of 1380  
*Xenopsylla cheopis*, parenteral infection with 1515
- Pasture management**, role in tick control of 260
- Pastures**  
*Aedes* spp. in, effects of burning on 79  
*Dermacentor reticulatus* in, in Yugoslavia 237  
 diflubenzuron in, residues of 2109  
 fenitron in, non-target effects of 3210  
 malathion in, residues of 2952  
 mosquito control in 3210
- Pastures contd.**  
*Onthophagus granulatus* in, in Australia 2728  
 Oribatei in, in Azerbaijan 1051  
 pest management in, book 2833  
*Scathophaga stercoraria* in, in Michigan 2454, 2709
- Pastures, irrigated**  
*Aedes* spp. in, in California 2088  
*Culex tarsalis* in, in California 2088  
 mosquito control in, *Bacillus thuringiensis* for 2084, 2088
- Pathogen-host interactions**, population dynamics of invertebrates and their pathogens 2839
- pathrushevae**, *Cnetha* (see *Simulium pathrushevae*)
- pathrushevae**, *Simulium* (*Cnetha*)
- pavlovskii**, *Androlaelaps*
- pavlovskii**, *Latrodectus pallidus*
- pavlovskiy**, *Laelaps*
- Peanut** (see *Groundnut*)
- Peaton virus**  
 characterisation of 1253  
 in  
 cattle, in New South Wales 862, 1253  
*Culicoides brevitarsis*  
 in New South Wales 862  
 in Queensland 1253
- pecorum**, *Gasterophilus*
- Pectinase** (see *Polygalacturonase*)
- pectinata**, *Guntheria*
- pectinata**, *Pollenia*
- Pectinophora gossypiella**, on man, hypersensitivity to 319
- peculiaris**, *Hybomitra*
- pedalis**, *Linognathus*
- Pediculus capitis**  
 biology of 1174  
 control of 1142, 1147, 1174  
 insecticides for 345, 347, 559, 1178, 1498  
 epidemiology of 1174, 2014, 2570  
 in Italy 768, 2014, 2570  
 in Netherlands 1178  
 in New Zealand 559  
 in Switzerland 1174  
 in UK 347, 1142, 1147  
 in USA 1498  
 insecticides in, determining of susceptibility to 3166  
 lindane resistance in, in Netherlands 1178  
 on man  
 in California 1498  
 in England 1147  
 in Italy 768, 2014, 2570  
 in New Zealand 559  
 in Switzerland 1174  
 in UK 1142  
 outbreaks of 559  
 taxonomy of, characters distinguishing  
*Pthirus pubis* and 34
- Pediculus humanus**  
 antennae in, sensilla on 1180  
 biology of 1174  
 control of 1142, 1147, 1174  
 insecticides for 2292  
 epidemiology of 1174  
 in Egypt 2292  
 in Switzerland 1174  
 in UK 1142, 1147  
 insecticides in, determining of susceptibility to 3166  
 olfactory system in, evolution of 3132  
 on man  
 dermatitis caused by 769  
 in Egypt 2292  
 in England 1147  
 in Switzerland 1174  
 in UK 1142  
 precocenes in, effects of 342  
*Rickettsia prowazekii* in, replication of 3066  
 taxonomy of, characters distinguishing  
*Pthirus pubis* and 34
- Pediculus humanus capitis** (see *P. capitis*)
- Pediculus humanus corporis** (see *P. humanus*)
- pedifer**, *Phlebotomus*
- peditaeniatus**, *Anopheles*
- pedrol**, *Culex*
- Pelargonium radula**, insecticidal activity of oil from 2879
- Pelargonium roseum** (see *P. radula*)
- penetrans**, *Tunga*
- Penfluron** (see *Benzamide*, 2,6-difluoro-*N*-[[[4-(trifluoromethyl)phenyl]amino]carbonyl]-)
- penghuensis**, *Aedes*
- penicilliger**, *Amalareus* (*Ceratophyllus*; *Malaræus*)
- penicilliger**, *Ceratophyllus* (see *Amalareus penicilliger*)
- penicilliger**, *Macrocheles*
- penicilliger**, *Malaræus* (see *Amalareus penicilliger*)
- Penicillium**  
 in  
*Culicidae*  
 in Ukraine 1025, 1757  
 in USSR 1019
- Penicillium cyclopium**, antigens of 1669
- peniculus**, *Macrocheles*
- Pennap E** (see *Parathion*)
- Pennap M** (see *Parathion-methyl*)
- Pennsylvania**  
 Chironomidae in, on *Rhododendron* 3359  
*Pthirus pubis* in, on man 348, 1176  
*Trixacarus caviae* in, on guinea-pig 1980
- penobscotensis**, *Simulium*
- 9-Pentacosene**, (*Z*)-, *Haematobia irritans* sex-pheromone component 1898
- Pentanedial**, *Centruroides noxius* venom detoxified by 2781
- 1,4-Pentanediamine**, *N*<sup>4</sup>-(6-chloro-2-methoxy-9-acridinyl)-*N*<sup>1</sup>,*N*<sup>2</sup>-diethyl- (see *Mepacrine*)
- Pentanedioic acid**, 2-oxo-, in *Cochliomyia macellaria*, unchanged during anaerobic metabolism 1359
- Pentanoic acid**, *Cochliomyia hominivorax* responses to 1896
- Penthetor lucasi**, *Whartonia penthetor* on 2235
- penthetor**, *Whartonia*
- Peptic ulcer**, in pig, caused by *Vespula* 914
- Peptides**  
 as oviposition attractants for mosquitoes 1759  
 in *Aedes aegypti*, incorporation of dietary amino acids into 2047  
 in *Calliphora vicina* brain 887, 2711  
 in *Pogonomymex barbatus* venom, hemolytic activity of 231
- perakensis**, *Radfordia*
- peregrina**, *Boettcherisca* (*Sarcophaga*)
- peregrina**, *Sarcophaga* (see *Boettcherisca peregrina*)
- peregrini**, *Geomydoecus*
- perfiliewi**, *Phlebotomus*
- perglaber**, *Macrocheles*
- Periplaneta**, control of, biological 1737
- Periplaneta americana**  
 accessory reproductive glands in, effects of alkaloids on 339  
 4-aminobenzoic acid in, fate of 546  
 antennae in  
 proteins in 3153  
 role in flight of 21  
 sensilla on 548, 1167, 1486, 2843  
 antibiotics in, effects on carbaryl toxicity of 2505  
 attractants for 1983, 3161  
 bacteria in, in Philippines 1727  
 biology of 788  
 composition of, effects of thermal acclimation on 1490  
 control of 335  
 antifeedants for 317, 2796  
 inert dusts for 3126  
 insecticides for 23, 759, 788, 1681, 2504, 2505, 2516, 2848  
 corpus allatum in  
 neural inhibition of 550  
 ovarian regulation of activity of 2844  
 DDT analogues in, structure-activity relationships in 3123  
 DDT in  
 effects of 552  
 effects on ATPase of 1160  
 descriptions of 554  
 development in, effects of salivarectomy on 1484

**Periplaneta americana** *contd.*

digestive enzymes in 1161, 2551, 2840  
 enzymes in 336, 552, 748, 786, 794, 799,  
 1160, 1169, 1734, 2784, 3153  
 escape system in 3162  
 eyes in 3155  
 flight activity in, initiation of 1166  
 flight in, factors affecting duration of  
 1163  
 food utilisation in 28  
 glycogen in, regulation of 336  
 gut in  
 absorption of amino acids in 553  
 bacteria in 29  
 hemocytes in, anaerobic metabolism in  
 1731  
*Heterometrus fulvipes* venom in, effects  
 on succinate dehydrogenase of 2784  
 hygroreception in 2843  
 in German Democratic Republic 335  
 in India 793  
 in Netherlands 1740  
 in Philippines 1727  
 in Taiwan 3161  
 in Turkey 788  
 in UK 1141  
 in dwellings, in Philippines 1727  
 in hospitals, in Philippines 1727  
 in markets, in Philippines 1727  
 in restaurants, in Philippines 1727  
 in rice stores, in Taiwan 3161  
 insect growth regulators in, effects of  
 1466  
 insecticide susceptibility in  
 effects of carbon dioxide on 2848  
 effects of crowding on 2848  
 insecticides in, acetylcholinesterase  
 inhibition by 748  
 intermale agonistic interactions in 1741  
 juvenile hormones in, effects of food  
 availability on synthesis of 2009  
 learning in 797  
 Malpighian tubules in, development of  
 2552  
 mechanoreceptors in 1491, 1735  
 moulting hormones in 787  
 nervous system in 338, 550, 799, 1164,  
 1166, 1485, 2559, 2842, 2845, 2847,  
 3154  
 N-acetyldopamine in 2548  
 effects of X-irradiation on 1169  
 glycogen in 2008  
 neuromuscular system in 791  
 neurosecretory system in 2289  
 effects of dietary glycine on 798  
 nymphs of 554  
 olfactory responses in 797  
 ovaries in, effects of chemosterilants on  
 1165  
 parasitised by  
*Evania appendigaster* 788  
*Tetrastichus hagenowii* 334, 1739,  
 2550  
 Parvoviridae in, infectivity of 22  
 preyed on by  
*Formica exsecta* 2846  
*Myrmarchne platypalpus*, in Punjab  
 793  
 proctolin in, activity of analogues of  
 1487  
 prothoracic gland in 2847  
 pyrethroids in  
 neurotoxicity of 3435  
 symptoms caused by 3435  
 reproduction in  
 effects of food availability on 2009  
 not affected by salivarectomy 1484  
 salivary glands in 786, 2477  
 serum in, hemagglutinins in 2561  
 sex pheromone of  
 absolute configuration of 2554  
 identity of 2553  
 laboratory synthesis of 2553  
 mimics of 3152  
 orientation to 789  
 responses to mimics of 2540  
 stepping patterns in 2287  
 sternal gland in 337  
 functions of 3163  
 tergal glands in 337  
 tibia in, sensilla on 2547  
 tracheal system in, air transport in 2288

**Periplaneta americana** *contd.*

trehalose in, regulation of utilisation of  
 1734  
 walking in, nervous control of 1485  
**Periplaneta australasiae**  
 descriptions of 554  
 in Netherlands 1740  
 in UK 1141  
 nymphs of 554  
 Parvoviridae in, infectivity of 22  
**Periplaneta brunnea**  
 antennae in, sensilla on 1167  
 descriptions of 554  
 nymphs of 554  
 Parvoviridae in, infectivity of 22  
**Periplaneta fuliginosa**  
 denso nucleosis virus in, characterisation of  
 547  
 descriptions of 554  
 nymphs of 554  
 Parvoviridae in, characterisation of 22  
 predators of, defence mechanisms against  
 2846  
**Periplaneta japonica**  
 descriptions of 554  
 nymphs of 554  
 Parvoviridae in, infectivity of 22  
 predators of, defence mechanisms against  
 2846  
**Periplanone B** (see Spiro[11-  
 oxabicyclo[8.1.0]undec-6-ene-2,2'-oxiran]-  
 3-one, 8-methylene-5-(1-methylethyl)-,  
 [1R-(1R\*,2R\*,5S\*,6E,10R\*)])  
**Perisoreus canadensis**, *Tarsopsylla*  
*octodecimentata* on, in Alaska 1187  
**Perlan Alb** (see 1-Dodecanesulfonic acid,  
 sodium salt)  
**Permanent** (see Permethrin, with pyrethrins)  
**Permethrin** ((3-phenoxyphenyl)methyl 3-  
 (2,2-dichloroethenyl)-2,2-  
 dimethylcyclopropanecarboxylate)  
 against  
*Aedes aegypti* 1763, 1810, 2886  
*A. cantans* 387, 828  
*A. caspius* 2886  
*A. vexans* 387  
*Amblyomma americanum* 3059  
 on man 1937  
*Anopheles quadrimaculatus* 1193,  
 1763  
*Blattella germanica* 657, 1143, 1144  
*Culex molestus* 401, 828  
*C. pipiens* 2604, 2886  
 Culicidae 78, 2111  
*Damalinea bovis*, on cattle 1742  
 Diptera, on cattle 223  
*Euproctis chrysorrhoea* 3377  
*Glossina morsitans* 1330  
*G. palpalis* 1326, 2157  
*G. tachinoides* 2157  
*Haematobia irritans*, on cattle 2430  
 insects in aircraft 2516  
*Ixodes ricinus* 1639  
*Musca autumnalis*, on cattle 2430  
*M. domestica* 657, 1143, 1144, 1439,  
 2502, 3371  
 in animal housing 455  
 in fowl dung 2703  
*Ornithonyssus sylviarum*, on fowl  
 1953  
*Panstrongylus megistus* 1507  
*Paratanytarsus*, in water supply 2713  
*Pediculus capitis* 345  
*P. humanus*, on man 2292  
*Psorophora columbiae* 1193  
*Triatoma infestans* 560  
 biodegradability of 1144  
 cost of 1144  
 in *Asellus aquaticus*, toxicity of 2713  
 in carpets, persistence of 2516  
 in cattle ear tags 2430  
 in clothing 1763, 1937  
 in fish, toxicity of 2713  
 in fowl feed 2703  
 in glassfibre strips 455  
 in man, residues of 2292  
 in polluted water, reduced activity of  
 2886  
 in *Rhodnius prolixus*, effects on  
 neurosecretory system of 1182  
 in savanna, non-target effects of 2157  
 in textiles, persistence of 2516  
 non-target effects of 876

**Permethrin** *contd.*

on walls, persistence of 401  
 persistence of 1326, 1330  
 repellent for, Simuliidae, on cattle 1288  
 resistance to, in  
*Culex quinquefasciatus*  
 development and loss of 2110  
 genetics of 3281  
 penetration rate not involved in 392  
*Musca domestica*  
 development of 1356  
 in German Federal Republic 1356  
 synergists for, piperonyl butoxide as  
 1193  
 with pyrethrins, against, *Alphitobius*  
*diaperinus*, in fowl housing 687  
 (1R-*cis*)-  
 against  
*Anopheles quadrimaculatus* 1193  
*Psorophora columbiae* 1193  
 in *Periplaneta americana*, neurotoxicity  
 of 3435  
 resistance to, in  
*Anopheles stephensi* 3238  
*Culex quinquefasciatus*, and cross-  
 resistance 2353  
 synergists for, piperonyl butoxide as  
 1193  
 (1RS-*cis*)-  
 against  
*Anopheles quadrimaculatus* 1193  
 Chironomidae 3346  
 Culicidae 78  
*Psorophora columbiae* 1193  
 metabolism of, review 1445  
 synergists for, piperonyl butoxide as  
 1193  
 (1RS-*trans*)- (see Transpermethrin)  
 (1R-*trans*)- (see Biopermethrin)  
**pernicius, Phlebotomus**  
**perognathi, Geomylichus**  
*Perognathus fasciatus*, *Geomylichus*  
*perognathi* on, in Oregon 3096  
**Perognathus parvus**  
*Geomylichus perognathi* on, in Oregon  
 3096  
 mites on, in Oregon 2249  
**Peromyscopsylla bidentata**  
 in Hungary 2027  
 in USSR 1046, 3184  
 on *Crociodura leucodon*, in Hungary  
 2027  
 on small mammals, in Siberia 3184  
**Peromyscopsylla ostsibirica**  
 in USA (Alaska) 2322  
 on *Microtus oeconomus*, in Alaska 2322  
*Pasteurella tularensis* in, in Alaska 2322  
**Peromyscopsylla ostsibirica longiloba** (see  
*P. ostsibirica*)  
**Peromyscopsylla silvatica**  
 in USSR 1052  
 on small mammals, in Siberia 1052  
**Peromyscus**  
 Hoplopleuridae on, in Mexico 1465  
 preying on, *Latrodectus hesperus* 2493  
**Peromyscus leucopus**  
*Babesia microti* in, in North America  
 3397  
*Dermacentor variabilis* on, in Connecticut  
 248  
*Ixodes dammini* on  
 in Connecticut 248  
 in Massachusetts 1651  
*Orius insidiosus* on, in Connecticut 2025  
**Peromyscus maniculatus**  
 arthropod parasites of, reinfestation by  
 2002  
 Colorado tick fever, virus in, in Colorado  
 3406  
*Dermacentor andersoni* on, in Colorado  
 1403  
*Myobia musculi* on, in South Dakota  
 511  
*Mycopetes musculus* on, in South  
 Dakota 511  
*Yersinia pestis* in, in California 2319  
*Peropertyx macrootis*, *Psorergatoides*  
*peropertyx* on, in French Guiana 736  
*peropertyx*, *Psorergatoides*  
*persicae*, *Myzus*  
*persicus*, *Argas*  
*personatus*, *Reduvius*  
*persulcatus*, *Ixodes*



- perturbans, Coquillettia (Manson)**  
**perturbans, Mansonia** (see *Coquillettia perturbans*)
- Peru**  
 Culicidae in, viruses in 1828  
*Lutzomyia amazonensis* in 1256  
*L. llanosmartinsi* in 1257  
 mites in, in house dust 921  
*Ornithodoros amblyus* in  
   on man 275  
   viruses in 275  
 Phlebotominae in 1259
- Pest control**  
 book 322  
 economics of research leading to 1924  
 future of 1715
- Pest management**  
 book 2833  
 microbial agents in 3118
- Pesticides**  
 analysis of, in the field 235  
 application equipment and techniques,  
   review 2271  
 behaviour of, physical principles of, book  
   2503  
 book 1432, 2787  
 determination of, conference 2260  
 formulations of, effects on safe use of  
   527  
 hazard classification of 2791  
 in foodstuffs, residues of 529, 3128  
 in insects, effects on nervous system of  
   329  
 metabolism of, book 2790  
 microbial, registration of 1540  
 non-target effects of 313  
   review 1987  
 occupational exposure to 1684  
 registration of, environmental criteria for  
   2786  
 residues of 313  
 use of  
   in South Africa 1984  
   indirect costs resulting from 751  
   prodigal or precise, review 760
- Pet animals**  
 mites on, transfer to man of 288  
 tick control on 711
- Petauridae, Haemolaelaps** spp. on, in  
 Australia 3103
- Petaurista petaurista, Atopophthirus setosus**  
 on, in China 558
- Petaurista yunnanensis, Ascoschoengastia**  
 spp. on, in Yunnan 293
- Petrochelidon pyrrhonota**  
 Fort Morgan virus in, in Colorado 2219  
*Oeciacus vicarius* on  
   in Colorado 1749  
   in South Dakota 1749  
   in USA 44
- peus, Culex**
- pfitzeri, Nearctopsylla**
- pH**  
 in *Aedes atropalpus* mid-gut 63  
 in *Aedes eapactius* mid-gut 63  
 in *Aedes scutellaris* mid-gut 63  
 in mosquito cell lines, variation in 1566  
 in *Nauphoeta cinerea* hemolymph, effects  
   on ventilation of 1488  
 in *Simulium* breeding water 2666
- Phaenicia cuprina** (see *Lucilia cuprina*)
- Phaenicia eximia** (see *Lucilia eximia*)
- Phaenicia sericata** (see *Lucilia sericata*)
- Phaetabanus, genitalia** in 463
- Phaetabanus limpidae**  
 descriptions of 463  
 in Argentina 463
- Phagostimulants, for arthropods** 1471
- phalaenoides, Psychoda**
- Phalangeridae, Haemolaelaps** spp. on, in  
 Australia 3103
- pharsonis, Monomorium**
- Pharyngomyia, in Tadzhikistan** 154
- Pharyngomyia picta**  
 in Spain 1117  
 on *Cervus elaphus*, in Spain 1117
- Pheasant** (see also named species)  
*Calliphora* spp. on, in Washington State  
 2186  
*Clostridium botulinum* in, in Washington  
 State 2186  
 lindane in, effects on blood of 2793  
 malathion in, effects on blood of 2793
- Pheasant contd.**  
*Mallophaga* on, in Spain 340  
*Wohlfahrtia* spp. on, in Washington State  
 2186
- Pheasant carcasses, Dryomyza anilis** in,  
 in UK 2183
- Phenanthro[3,4-d]-1,3-dioxole-5-carboxylic  
 acid, 8-methoxy-6-nitro-**  
 sterilant for  
*Aedes aegypti* 1755  
*Dysdercus koenigii* 1755  
*Tribolium castaneum* 1755
- Phenobarbital** (5-ethyl-5-phenyl-  
 2,4,6(1H,3H,5H)-pyrimidinetrione)  
 in Calliphoridae, induction of microsomal  
 oxidase by 2712  
 in *Musca domestica*, induction of  
 glutathione S-transferase by 3343  
 in rat, effects on malathion toxicity of  
 750
- Phenobarbitone** (see Phenobarbital)
- Phenol, 4-(2-aminoethyl)-, in rat,**  
 levarterenol release caused by 3115
- Phenol, 3,5-bis(1,1-dimethylethyl)-,  
 methylcarbamate** (see Butacarb)
- Phenol, 2,6-dichloro-**  
*Amblyomma maculatum* responses to  
 926  
 in *Amblyomma tholloni* 1405  
 in *Dermacentor andersoni*, storage in  
 lipids of 3404  
 in *Dermacentor variabilis*, storage in lipids  
 of 3404  
*Rhipicephalus sanguineus* responses to  
 926
- Phenol, 3,5-diethyl-, methylcarbamate** (see  
 Fenethacarb)
- Phenol, 2-(1,3-dioxolan-2-yl)-,  
 methylcarbamate** (see Dioxacarb)
- Phenol, 4-methyl-, Cochliomyia hominivorax**  
 responses to 1896
- Phenol, 2-methyl-4,6-dinitro- (see DNOC)**
- Phenol, 2-(1-methylethoxy)-,  
 methylcarbamate** (see Propoxur)
- Phenol, 3-methyl-5-(1-methylethyl)-,  
 methylcarbamate** (see Promecarb)
- Phenol, 2-(1-methylpropyl)-4,6-dinitro- (see  
 Dinoseb)**
- Phenol, 4-nitro-, in Musca domestica, EPN**  
 metabolite 206
- Phenol oxidase** (see Oxygenase, monophenol  
 mono-)
- 10H-Phenothiazine, in vertebrates, toxicity**  
 of 1012
- Phenothrin ((3-phenoxyphenyl)methyl 2,2-  
 dimethyl-3-(2-methyl-1-  
 propenyl)cyclopropanecarboxylate)**  
 against  
*Blattella germanica* 1144  
*Musca domestica* 1144  
*Panstrongylus megistus* 1507  
 (1R-cis)-, in *Periplaneta americana*,  
 neurotoxicity of 3435  
 (1R-cis,trans)-  
 against  
*Anopheles quadrimaculatus* 1193  
 Culicidae 78, 2111  
*Psorophora columbiana* 1193  
 synergists for, piperonyl butoxide as  
 1193  
 (1R-trans)-, in *Periplaneta americana*,  
 neurotoxicity of 3435
- Phenoxybenzamine (N-(2-chloroethyl)-N-(1-  
 methyl-2-phenoxyethyl)benzenemethana-  
 mine)**  
 in *Amblyomma hebraeum*, not inhibiting  
 ATPase 2740  
 in rat, increasing levarterenol release by  
*Latrodectus antheratus* venom 3115
- Phenthoate** (ethyl  $\alpha$ -[(dimethoxyphosphino-  
 thio)thio]benzeneacetate)  
 against, *Musca domestica* 1893  
 resistance to, in, *Culex pipiens* 2604  
 with trichlorophen, against, *Culex pipiens*  
 2604
- L-Phenylalanine**  
 in *Aedes togoi*, utilisation by *Brugia patei*  
 of 68  
 in *Anopheles atroparvus*, utilisation by  
*Brugia patei* of 68  
 in *Anopheles stephensi*, effects of  
*Plasmodium berghei* on 1199
- DL-Phenylalanine, 3-hydroxy- $\alpha$ -methyl-,  
 against, Lucilia cuprina** 1382
- Phenylbutazone** (4-butyl-1,2-diphenyl-3,5-  
 pyrazolidinedione)  
 against, *Sarcoptes scabiei*, on man 291
- Phenylmercuric acetate** (see Mercury,  
 (acetato-O)phenyl-)
- Pherbellia obscura**  
 taxonomy of  
 characters distinguishing *P. subtilis* and  
 677  
*Pherbellia subtilis* misidentified as 677
- Pherbellia punctata**  
 parasitising, *Succinea putris* 2198  
 population dynamics of 2198
- Pherbellia subtilis**  
 sp. nov., description of 677  
 biology of 677  
 hosts of 677  
 in Canada 677  
 in USA 677
- Pherbellia ventralis**  
 taxonomy of  
 characters distinguishing *P. subtilis* and  
 677  
*Pherbellia subtilis* misidentified as 677
- Pheromermis tabani**  
 sp. nov., description of 2695  
 in, *Tabanus autumnalis*, in Crimea 2695
- Pheromermis vernalis**  
 sp. nov., description of 2695  
 in, *Tabanus autumnalis*, in Crimea 2695
- Pheromones**  
 formulations of, controlled release 2829  
 in insects, review 1716
- philipi, Schoengastia**
- philippinense, Leptotrombidium imphalum**
- philippinensis, Anopheles**
- Philippines**  
*Anopheles aconitus* in 2127  
*A. annularis* in, viruses in 3221  
*A. sudaicus* in 2127  
*Culex bitaeniorhynchus* in, viruses in  
 3221  
*C. tritaeniorhynchus* in, viruses in 83,  
 3221  
*C. vishnui* in, viruses in 83  
 Culicidae in 856  
 ectoparasites in 2804, 2818  
   on domestic animals 2813  
*Leptotrombidium* spp. in 2490  
 malaria in 2127  
*Periplaneta americana* in, bacteria in  
 1727  
*Promuricheyla lukoschusi* in, on  
*Nannosciurus* 2480  
*Protaetia fusca* in 3382  
 Spinturnicidae in 3416  
 Trombiculidae in 3428
- Philonthus**  
 in cattle dung, successions of 490  
 in dung, in USSR 1057
- Philonthus longicornis**  
 biology of 3345  
 descriptions of 3345  
 preying on, *Musca domestica* 3345
- Philopteridae, adaptive radiation in** 2308
- Philopteris, on Passeriformes, in New  
 Zealand** 801
- Phlebotominae**  
 arboviruses in, in Brazil 2897  
 bibliography 1254, 1255  
 control of 1844  
   insecticides for 1261, 1265, 2536  
 feeding behaviour in, effects of  
   temperature on 2283  
 in Colombia 2661  
 in Nearctic region, book 2587  
 in Panama 2150  
 in Peru 1259  
 in South Africa 2139  
 in Venezuela 419  
*Leishmania* spp. in  
   development of 1084  
   transmission of 326  
 nocturnal activity in 137  
 on man  
   in French Guiana 422  
   in Panama 2283  
 physiological age of, determining of 2874  
 traps for 97, 2971
- Phlebotomus**  
*Coelomomyces ciferrii* in 2660

- Phlebotomus contd.**  
control of 3308  
in Bihar 1262  
in Malagasy Republic 2389  
in Saudi Arabia 2530  
in Spain 3308  
insecticides in, determining of susceptibility to 3190  
taxonomy of, enzymes as characters for 2967
- Phlebotomus affinis** (see *Sergentomyia affinis*)
- Phlebotomus africanus** (see *Sergentomyia africana*)
- Phlebotomus alexandri**  
in Saudi Arabia 2530  
in Spain 1843  
in USSR 1688  
*Leishmania* spp. in, in Kirgizia 1688
- Phlebotomus amazonensis** (see *Lutzomyia amazonensis*)
- Phlebotomus antennatus** (see *Sergentomyia antennata*)
- Phlebotomus argentipes**  
appendages in, abnormalities in 1267  
*Aspergillus terreus* in, pathogenicity of 2968  
control of, insecticides for 1263  
in India 1260, 1261, 1262, 1263, 1265, 1266, 1267, 1845, 2662  
in cattle housing  
in Bihar 1260  
in Gujarat 2662  
in dwellings, in Bihar 1260  
on man, in West Bengal 1845  
population dynamics of 1265  
rearing of, techniques for 2968  
*Rhizopus stolonifer* in, pathogenicity of 2968  
seasonal abundance of 1261
- Phlebotomus ariasi**  
diapause in 633  
dispersal of 134  
enzymes in 2967  
gonotrophic cycle in 2149  
habitats of 636  
in France 132, 134, 633, 636, 2149, 2967  
in Portugal 1843  
*Leishmania* spp. in, transmission of 2148  
*L. donovani* in, transmission of 132, 133, 134  
rearing of, techniques for 633  
seasonal abundance of 636  
taxonomy of, enzymes as characters for 2967
- Phlebotomus bedfordi** (see *Sergentomyia bedfordi*)
- Phlebotomus bergeroti**, in Saudi Arabia 2530
- Phlebotomus caucasicus**  
in Romania 1788  
in USSR 1688  
*Leishmania* spp. in 867  
in Kirgizia 1688
- Phlebotomus chabaudi**, in Spain 1843
- Phlebotomus chinensis**  
biology of 868  
control of, insecticides for 868  
in China 868  
in animal housing, in China 868  
in caves, in China 868  
on cattle, in China 868  
on donkey, in China 868  
taxonomy of 869
- Phlebotomus colabaensis**, in India 1262
- phlebotomus, Culicoides**
- Phlebotomus dubosqi**  
diel activity in 2147  
hosts of 2147  
in Senegal 2147  
in rodent burrows, in Senegal 2147  
*Leishmania major* in, in Senegal 2147
- Phlebotomus kazeruni**, in Saudi Arabia 2530
- Phlebotomus lesleyae** (see *Sergentomyia lesleyae*)
- Phlebotomus major**  
in India 1262  
in Italy 764  
in Romania 1788  
in animal housing, in Italy 764
- Phlebotomus major wui**  
biology of 421
- Phlebotomus major wui contd.**  
in China 421
- Phlebotomus martini**  
feeding behaviour in 1086  
in Kenya 1086, 2972  
*Leishmania* spp. in, in Kenya 2972  
on lizard, in Kenya 2972
- Phlebotomus mascittii**  
autogeny in 2149  
gonotrophic cycle in 2149  
in France 636, 1843, 2149  
in Italy 764  
in animal housing, in Italy 764  
taxonomy of 869
- Phlebotomus papatasi**  
appendages in, abnormalities in 1267  
*Aspergillus terreus* in, pathogenicity of 2968  
control of  
insecticides for 1263, 1576, 2536  
repellents for 1576  
DDT resistance in, in Bihar 1263  
flight height in 2145  
in Greece 1576  
in India 1261, 1263, 1266, 1267, 2662  
in Portugal 1843  
in Saudi Arabia 2530, 2535, 2536  
in Sudan 634  
in USSR 2145, 3307  
in cattle housing, in Gujarat 2662  
in cotton fields, in Turkmenia 2145  
in dwellings, in Gujarat 2662  
Isfahan virus in, in Turkmenia 3307  
*Leishmania* spp. in 867  
*L. major* in, infectivity of, effects of host on 2146  
rearing of, techniques for 2968  
*Rhizopus stolonifer* in, pathogenicity of 2968  
seasonal abundance of 1261, 1576, 2535
- Phlebotomus pedifer**  
feeding behaviour in 1086  
in Kenya 1086
- Phlebotomus perfliewi**  
enzymes in 2967  
in Italy 2967  
taxonomy of, enzymes as characters for 2967
- Phlebotomus perniciosus**  
diapause in 633  
enzymes in 2967  
in France 633, 636, 2967  
in Italy 764, 2967  
in Portugal 1843  
in Tunisia 2967  
in animal housing, in Italy 764  
rearing of, techniques for 633  
taxonomy of, enzymes as characters for 2967
- Phlebotomus rodhaini**  
in Kenya 2972  
*Leishmania* spp. in, in Kenya 2972  
on lizard, in Kenya 2972
- Phlebotomus schwetzi** (see *Sergentomyia schwetzi*)
- Phlebotomus sergenti**  
control of  
insecticides for 1576  
repellents for 1576  
Entomophthorales in, in Algeria 2660  
in Algeria 2660  
in Greece 1576  
in Portugal 1843  
in Saudi Arabia 2530  
in USSR 1688  
*Leishmania* spp. in, in Kirgizia 1688  
seasonal abundance of 1576
- Phlebotomus simici**, taxonomy of 869
- Phlebotomus stantoni**, in India 1262
- Phoma**, in, Culicidae, in Ukraine 1757
- Phoridae**, in Czechoslovakia 204
- Phormia**, control of, traps for 895
- Phormia regina**  
control of 2524  
growth regulators for 464  
enzymes in 2712  
feeding preferences in, role of carbohydrate reserves in 1619  
in USA 1346, 2524  
insecticide susceptibility in, role of microsomal oxidase in 2712  
labellar taste hairs in, age-related changes in 1370
- Phormia regina contd.**  
methoprene in, development inhibition by 464  
olfactory responses in, to novel odours 3047  
on sheep, in Wyoming 2524  
ovaries in, factors affecting number of ovarioles in 3361  
tarsi in, chemosensilla on 1614  
ziziphin in, effects on chemoreceptors of 1613
- Phormia terraenovae**  
as component of poultry feed 1623  
control of 2524  
growth regulators for 464  
flight ability in, programmed loss of 3026  
in USA 2524  
methoprene in, development inhibition by 464  
on sheep, in Wyoming 2524  
parasitised by, *Nasomia vitripennis* 1895  
proboscis extension response in 678  
sex ratio in 1599  
sex-related differences in 1599  
water receptors in, sugar reception by 910
- Phosalone** (S-[(6-chloro-2-oxo-3(2H)-benzoxazolyl)methyl] O,O-diethyl phosphorodithioate)  
against  
*Cimex lectularius*, in animal housing 2562  
*Menacanthus stramineus*, on fowl 2562  
*Menopon gallinae*, on fowl 2562  
*Musca domestica* 1893
- Phosmet** (S-[(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)methyl] O,O-dimethyl phosphorodithioate)  
against  
*Musca domestica* 1893  
Simuliidae, on cattle 1289  
*Stomoxys nigra*, on cattle 203
- Phosphamidon** (2-chloro-3-(diethylamino)-1-methyl-3-oxo-1-propenyl dimethyl phosphate)  
against, *Boophilus microplus*, on cattle 2746  
resistance to, in, *Culex pipiens* 2604  
with trichlorphon, against, *Culex pipiens* 2604
- Phosphatase**, in *Musca domestica*, not involved in insecticide resistance 1606
- Phosphatase, acid**  
in *Babesia bigemina* 264  
in *Babesia ovis* 264  
in *Culex tritaeniorhynchus*, genetics of 2377  
in *Periplaneta americana* salivary glands 786  
in *Stomoxys calcitrans* 3030  
in *Stomoxys calcitrans* larvae, activity pattern of 2418  
isoenzymes  
in *Culex ocellus* 2923  
in *Culex panocossa* 2923
- Phosphatase, adenosine tri-**  
in *Musca domestica*, role in insecticide resistance of 879  
in *Periplaneta americana* coxal muscles, heterogeneity of 794  
in *Periplaneta americana* suboesophageal ganglia, effects of DDT on 1160  
calcium-activated, in *Blattella germanica*, DDT sensitivity to 1736  
magnesium-activated, in *Periplaneta americana* nervous system, not inhibited by DDT 552  
potassium-sodium-activated  
in *Amblyomma hebraeum* salivary glands, properties of 2740  
in *Glossina morsitans* gut 2995  
in *Periplaneta americana* antennae 3153  
in *Periplaneta americana* nervous system, not inhibited by DDT 552  
in *Sarcophaga nodosa* gut 2995
- Phosphatase, alkaline**  
in *Aedes aegypti* Malpighian tubules, effects of *Dirofilaria repens* on 101  
in *Periplaneta americana* salivary glands 786



- Phosphatase**, glycerol 2-, in *Musca domestica* head, activity pattern of 460
- Phosphate**  
in rice-field soils, relation of Chironomidae and 1624  
in *Simulium* breeding water 2666
- Phosphine**, WHO data sheet on 3122
- Phosphinothioic amide**, *P,P*-bis(1-aziridinyl)-*N*-cyclohexyl-, in *Lucilia cuprina*, toxicity of 1609
- Phosphinothioic amide**, *P,P*-bis(1-aziridinyl)-*N*-methyl-  
in air, determination of 2272  
sterilant for  
*Cimex hemipterus* 43  
*Glossina morsitans* 762  
vapour pressure of 2272
- Phosphoglucosomerase** (see Isomerase, glucose phosphate)
- Phosphoglucosomutase** (see Phosphomutase, glucose)
- Phosphogluconate oxidative pathway**, in *Musca domestica* 157
- Phosphoglucose isomerase** (see Isomerase, glucose phosphate)
- Phospholipase A<sub>2</sub>**  
in *Apis mellifera* venom, allergenicity of 3381  
in man, antibodies to 2459  
in rat, cardiovascular effects of 1929  
in Vespid venoms 3381
- Phospholipids**  
in *Argas arboreus*, developmental changes in 2757  
in *Boophilus decoloratus* eggs 2210  
in *Dermacentor andersoni*, developmental changes in 2757
- Phosphomutase**, glucose  
in *Culex pipiens*  
polymorphism of 774  
variability of 1571  
in *Lutzomyia umbratilis* 140  
in Phlebotominae, use as taxonomic character of 2967  
in *Simulium damnosum* complex, use as taxonomic character of 3314  
in *Toxorhynchites splendens*, alleles of 625  
isoenzymes  
in *Hyalomma*, use in taxonomy of 934  
in *Triatoma infestans* 41
- Phosphonic acid**, phenyl-ethyl 4-nitrophenyl ester  
in *Musca domestica*  
EPN metabolite 206  
metabolism of 206
- Phosphonic acid**, (2,2,2-trichloro-1-hydroxyethyl)-, dimethyl ester (see Trichlorophon)
- Phosphonium**, decyltriphenyl-, bromochlorotriphenylstannate(1-), in *Musca domestica*, effects on ovarian development of 473
- Phosphonothioic acid**, phenyl-*O*-ethyl ester, in *Musca domestica*, EPN metabolite 206  
*O*-ethyl *O*-(4-nitrophenyl) ester (see EPN)  
*O*-ethyl *O*-8-quinolinyl ester (see Quintofos)
- Phosphoramidothioic acid**  
*O*-ethyl *S*-phenyl ester  
in *Tenebrio molitor*, inhibition of juvenile hormone esterase by 2795  
in *Trichoplusia ni*, inhibition of juvenile hormone esterase by 2795
- Phosphoramidothioic acid**, acetyl-, *O,S*-dimethyl ester (see Acephate)
- Phosphoribosyltransferase**, adenine, in *Anopheles albanus* 1213
- Phosphoribosyltransferase**, hypoxanthine, in *Anopheles albanus* 1213
- Phosphoric acid**  
2-chloro-1-(2,4-dichlorophenyl)ethenyl diethyl ester (see Chlorfenvinphos)  
2-chloro-3-(diethylamino)-1-methyl-3-oxo-1-propenyl dimethyl ester (see Phosphamidon)  
2-chloro-1-(2,4,5-trichlorophenyl)ethenyl dimethyl ester, (*Z*)- (see Tetrachlorvinphos)  
2-chloro-1-(2,4,5-trichlorophenyl)ethenyl methyl ester, (*Z*)-, in cattle, tetrachlorvinphos metabolite 1451
- Phosphoric acid** *contd.*  
1,2-dibromo-2,2-dichloroethyl dimethyl ester (see Naled)  
2,2-dichloroethenyl dimethyl ester (see Dichlorvos)  
diethyl 4-nitrophenyl ester (see Paraoxon)  
dimethyl 1-methyl-3-(methylamino)-3-oxo-1-propenyl ester, (*E*)- (see Monocrotophos)  
3-(dimethylamino)-1-methyl-3-oxo-1-propenyl dimethyl ester, (*E*)- (see Dicrotophos)  
triphenyl ester  
in *Musca domestica*, inducing mixed function oxidase 909  
synergist for, trichlorophon 2604  
tris(2-methylphenyl) ester  
sterilant for  
*Acheta domesticus* 673  
*Musca domestica* 673  
synergist for, trichlorophon 2604  
tris(4-nitrophenyl) ester  
against, *Periplaneta americana* 1681  
in rat, toxicity of 1681
- Phosphoric triamide**, hexamethyl- (see Hempa)
- Phosphorodithioic acid**  
*S*-[(6-chloro-2-oxo-3(2*H*)-benzoxazolyl)methyl] *O,O*-diethyl ester (see Phosalone)  
*S*-[(4-chlorophenyl)thio]methyl] *O,O*-diethyl ester (see Carbophenothion)  
*S*-[(5,7-dichloro-2-benzoxazolyl)methyl] *O,O*-diethyl ester (see Benoxafos)  
*O,O*-diethyl *S*-[(4-oxo-1,2,3-benzotriazin-3(4*H*)-yl)methyl] ester (see Azinphos-ethyl)  
*S*-[(1,3-dihydro-1,3-dioxo-2*H*-isindol-2-yl)methyl] *O,O*-dimethyl ester (see Phosmet)  
*O,O*-dimethyl *S*-[2-(methylamino)-2-oxoethyl] ester (see Dimethoate)  
*S,S'*-1,4-dioxane-2,3-diyl *O,O,O',O'*-tetraethyl ester (see Dioxathion)  
*S*-[(2-ethylamino)-2-oxoethyl] *O,O*-dimethyl ester (see Ethoate-methyl)  
*S*-[2-(formylmethylamino)-2-oxoethyl] *O,O*-dimethyl ester (see Formothion)  
*S,S'*-methylene *O,O,O',O'*-tetraethyl ester (see Ethion)
- Phosphorofluoric acid**, bis(1-methylethyl) ester, in *Trichoplusia ni*, esterase inhibition by 2795
- Phosphorothioic acid**  
*O,O*-bis(1-methylethyl) *S*-(phenylmethyl) ester, with trichlorophon, against, *Culex pipiens* 2604  
*O*-(4-bromo-2-chlorophenyl) *O*-ethyl *S*-propyl ester (see Profenofos)  
*O*-(4-bromo-2,5-dichlorophenyl) *O,O*-diethyl ester (see Bromophos-ethyl)  
*O*-(4-bromo-2,5-dichlorophenyl) *O,O*-dimethyl ester (see Bromophos)  
*O*-(3-chloro-4-methyl-2-oxo-2*H*-1-benzopyran-7-yl) *O,O*-diethyl ester (see Coumaphos)  
*O*-(2,5-dichloro-4-iodophenyl) *O,O*-dimethyl ester (see Iodofenphos)  
*O*-(2,4-dichlorophenyl) *O,O*-diethyl ester (see Dichlofenthion)  
*O,O*-diethyl *O*-[6-methyl-2-(1-methylethyl)-4-pyrimidinyl] ester (see Diazinon)  
*O,O*-diethyl *O*-[3-methyl-4-(methylthio)phenyl] ester  
against, *Lucilia cuprina*, on sheep 169  
resistance to, in, *Lucilia cuprina*, in Queensland 194  
*O,O*-diethyl *O*-[4-(methylsulfinyl)phenyl] ester (see Fensulfuthion)  
*O,O*-diethyl *O*-(4-nitrophenyl) ester (see Parathion)  
*O,O*-diethyl *O*-(3,5,6-trichloro-2-pyridinyl) ester (see Chlorpyrifos)  
*O*-[2-(diethylamino)-6-methyl-4-pyrimidinyl] *O,O*-diethyl ester (see Pirimiphos-ethyl)  
*O*-[2-(diethylamino)-6-methyl-4-pyrimidinyl] *O,O*-dimethyl ester (see Pirimiphos-methyl)  
*O*-(1,6-dihydro-6-oxo-1-phenyl-3-pyridazinyl) *O,O*-diethyl ester  
resistance to, in, *Culex pipiens* 2604
- Phosphorothioic acid** *contd.*  
*O*-(1,6-dihydro-6-oxo-1-phenyl-3-pyridazinyl) *O,O*-diethyl ester *contd.*  
with trichlorophon, against, *Culex pipiens* 2604  
*O,O*-dimethyl *S*-[2-(methylamino)-2-oxoethyl] ester (see Omethoate)  
*O,O*-dimethyl *O*-[3-methyl-4-(methylthio)phenyl] ester (see Fenthion)  
*O,O*-dimethyl *O*-(3-methyl-4-nitrophenyl) ester (see Fenitrothion)  
*O,O*-dimethyl *O*-(4-nitrophenyl) ester (see Parathion-methyl)  
*O,O*-dimethyl *S*-(phenylmethyl) ester, with trichlorophon, against, *Culex pipiens* 2604  
*O,O*-dimethyl *O*-(2,4,5-trichlorophenyl) ester (see Fenchlorphos)  
*O,O*-dimethyl *O*-(3,5,6-trichloro-2-pyridinyl) ester (see Chlorpyrifos-methyl)  
*O*-[4-[(dimethylamino)sulfonyl]phenyl] *O,O*-dimethyl ester (see Famphur)  
*O*-(2-ethoxyethyl) *O,O*-bis(4-nitrophenyl) ester  
against, *Periplaneta americana* 23  
anticholinesterase activity of 23  
hydrolysis of 23  
in rat, toxicity of 23  
*O*-ethyl *O*-methyl *O*-(2,4,5-trichlorophenyl) ester, against, *Wohlfahrtia magnifica*, on sheep 3349  
*O,O'*-(thiodi-4,1-phenylene) *O,O,O',O'*-tetramethyl ester (see Temephos)  
*O,O,O*-tris(4-nitrophenyl) ester  
against, *Periplaneta americana* 1681  
in rat, toxicity of 1681
- Phosphorotrithioic acid**  
*S,S,S*-tributyl ester  
in *Musca domestica*, inducing mixed function oxidase 909  
synergist for, pyrethroids 2353
- Phosphorus**  
isotope of mass 32  
Culicidae labelled with 3294  
*Delia antiqua* labelled with 754  
*Musca domestica* labelled with 754
- Phosphorylase**  
in *Heterometrus fulvipes* pedipalp muscles 2783  
in *Periplaneta americana* hind-gut, regulation of 336
- Photoperiod**, insect responses to, review 2278
- Phoxim** (4-ethoxy-7-phenyl-3,5-dioxo-6-aza-4-phosphaoct-6-ene-8-nitrile 4-sulfide)  
against  
*Choriotopes bovis* 504  
*Musca domestica* 1893  
*Psoroptes bovis* 504  
*Sarcoptes scabiei*, on pig 1959  
resistance to, in, *Culex pipiens* 2604
- Phthalic acid** (see 1,2-Benzenedicarboxylic acid)
- Phthalophos** (see Phosmet)
- Phthiraptera**  
bacteria in, in Kirghizia 1033  
*Dermatophilus congolensis* in, transmission of 777  
evolution of 2311  
in Iraq 3142  
in West Malaysia 2803  
olfactory system in, evolution of 3132  
on birds, in Kirghizia 1033  
on fowl, in Nigeria 2013  
on *Peromyscus maniculatus*, reinfestation by 2002  
on *Sylvilagus floridanus*, in USA 1155  
on vertebrates, in Afrotropical region, book 1177  
*Rickettsia mooseri* in, transmission of 2321  
zoogeography of 2311
- Physconelloides**  
on Columbinae 2566  
taxonomy of 2566
- Physcephalus sexalatus**  
in, *Aphodius sticticus*, in Bulgaria 689  
vectors of 316
- Phytoseiidae**, predation by, model 1369
- Pica pica**, famphur in, toxicity of 3009

- picea*, *Formica* (see *F. transcaucasica*)
- picea*, *Haematopota*
- Picoides tridactylus*, *Ceratophyllus adustus* in nests of, in Alaska 1187
- picta*, *Pharyngomyia*
- pictipes*, *Rhodnius*
- pictipes*, *Simulium*
- pictus*, *Chrysops*
- pictus*, *Dermacentor*
- Pies*, naled in, uptake from air of 2266
- Pig** (*Sus scrofa domestica*)
- Anopheles sinensis* on, in Honshu 2907
- arthropod pests of, in Queensland 16
- Cochliomyia hominivorax* on, in Netherlands Antilles 457
- Culex pipiens* on, in Honshu 2908
- C. tritaeniorhynchus* on, in Honshu 2907
- ectoparasites of, in Philippines 2813
- Glossina palpalis* on
- in Cameroon 1700
- in West Africa 1873
- G. tachinoides* on, in West Africa 1873
- Haematopinus suis* on
- effects of 985
- in German Democratic Republic 802
- in German Federal Republic 346, 1959
- in Ontario 1743
- Japanese encephalitis, virus in, in China 1827
- Ornithodoros moubata* on 3060
- Peaton virus in, antibodies to 1253
- Phthiraptera on, in Afrotropical region, book 1177
- Sarcoptes scabiei* on
- distribution pattern of 999
- effects of 985
- in German Federal Republic 1959
- in Indonesia 2806
- in Norway 1424, 1425
- in Sweden 1661
- symptoms of 999
- Simulium* spp. on, feeding by 2981
- Trypanosoma brucei* in
- in Ivory Coast 1872
- in West Africa 1869, 1873
- Vespula* spp. on, effects of 914
- Yersinia enterocolitica* in, in Japan 880
- Pig blood**
- diet component for, *Glossina morsitans* 1093
- sterilisation of,  $\gamma$ -irradiation for 1093
- Pig dung**
- fly control in, insect growth regulators for 2436
- Staphylinidae in, in USSR 1057
- Pig farms**
- fly control in 467
- Musca domestica* in
- in Florida 367
- in UK 467
- Stomoxys calcitrans* in, in USA 904
- synanthropic flies in, in USSR 1040
- Pig housing**
- fly control in
- insecticide-treated glassfibre strips for 455
- pyrethrins for 3350
- mosquito control in, insecticides for 1827
- Musca domestica* in
- in Florida 455
- in German Democratic Republic 3350, 3351
- pest control in, insecticide mist generator for 3351
- Pig waste**
- Culex quinquefasciatus* in, in North Carolina 374
- mosquito control in 374
- Pig-waste lagoons**
- insect fauna of, effects of organic pollution on 1814
- pest control in 1814
- Pigeon** (*Columba livia*)
- Argas persicus* on, development of 718
- A. robertsi* on, development of 2815
- Argasidae on, in Iran 2211
- Campanulotes* spp. on 1495
- Culiseta longiareolata* on, feeding by 2364
- Hyalomma marginatum* on, development of 244
- Pigeon contd.**
- Ornithocheyletia hallae* on, interactions between *Micromonospora chalcone* and 922
- Ornithocoris toledoi* on, feeding by 1747
- Rhodnius pallescens* on, in Panama 2576
- R. robustus* on 2019
- Pigeon housing**, *Rhodnius pallescens* in, in Panama 2576
- pilae**, *Knemidokoptes*
- pilosifemura*, *Haematopota*
- Pimephales promelas**
- predation by, effects of aquatic vegetation on 2936
- preying on, *Aedes aegypti* 2936
- Pine resin**
- bait component for, *Musca domestica* 3018
- in *Culex molestus*, inhibiting development 1011
- in quail, not affecting development 1011
- Pineapple** (*Ananas comosus*)
- Aedes simpsoni* in axils of, in Nigeria 591
- pionips**, *Aedes*
- Piophilidae casei**
- in Romania 453
- in USSR 884
- on man, in Belorussia 884
- parasites of, in Romania 453
- Piperazine**, 1-(4-cyclohexyl-1-oxobutyl)-4-methyl-
- repellent for
- Anopheles albimanus* 1813
- A. quadrimaculatus* 1813
- 1-Piperazinecarboxamide**, *N,N*-diethyl-4-methyl- (see Diethylcarbamazine)
- Piperidine**, 1-benzoyl-, repellent for, *Aedes aegypti* 2374
- Piperidine**, 1-dodecyl-, against, *Psoroptes* spp. 2488
- Piperidine**, 1-(3-methylbenzoyl)-, repellent for, *Aedes aegypti* 2374
- 4-Piperidinecarboxylic acid**, in *Periplaneta americana*, effects on central neurons of 2842
- 4-Piperidinesulfonic acid**, in *Periplaneta americana*, effects on central neurons of 2842
- Piperonyl butoxide** (5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole)
- in *Musca domestica*, inhibiting mixed function oxidase 909
- synergist for
- bioresmethrin 1143
- carbamates 2265
- carbaryl 2712
- DDT 2353, 3238
- propoxur 2712
- pyrethrins 1143, 1176, 1498
- pyrethroids 1193, 2353
- with pyrethrins, antagonistic 1507
- with tetramethrin, antagonistic 1507
- pipiens**, *Culex*
- Pipistrellus abramus**, *Leptotrombidium laxoscutum* on, in China 3099
- Pipistrellus pipistrellus**, Acari on, in Uzbekistan 1071
- Pirimiphos-ethyl** (O-[2-(diethylamino)-6-methyl-4-pyrimidinyl] O,O-diethyl phosphorothioate)
- resistance to, in, *Culex pipiens* 2604
- Pirimiphos-methyl** (O-[2-(diethylamino)-6-methyl-4-pyrimidinyl] O,O-dimethyl phosphorothioate)
- against
- Aedes cantans* 828, 2942
- A. vexans* 2942
- Anopheles balabacensis* 624
- Culex molestus* 401
- Ixodes ricinus* 1639
- Limnophyes minimus*, in sewage systems 2168
- Metriocnemus hygroscopicus*, in sewage systems 2168, 2719
- in aquatic habitats, non-target effects of 2942
- on walls, persistence of 401
- with fertilizers 2942
- Piroplasma bigeminum** (see Babesia bigemina)
- Piroplasma**, phylogeny of 2624
- Piroplasmosis** (see Babesiosis)
- Pistia**, *Mansonella* spp. associated with, in Kerala 2057
- pisum**, *Acyrtosiphon*
- Pit latrines**
- Chrysomya chloropyga* in, in Tanzania 2928
- Culex quinquefasciatus* in, in Tanzania 2928
- fly control in, traps for 2928
- pithecius**, *Catharsius*
- Pitymys irene**, *Genoneopsylla claviprocera* on, in China 2864
- Pitymys leucurus**, *Amphipsylla kulkarnii* on, in Nepal 3186
- Pitymys sikimensis**, *Amphipsylla kulkarnii* on, in Nepal 3186
- Plague** (see also *Yersinia pestis*)
- in Brazil 1751
- in California 2319
- in Iran 364
- in USA 2317
- prophylaxis against 50
- treatment of 2317
- Plankton**, pesticides in, non-target effects of 1987
- Plant containers**, *Aedes aegypti* in, in Fiji 412
- Plant oils**, naled in, uptake from air of 2266
- Plants**
- pesticides in, penetration of 2503
- Simulium* spp. on, in Togo 1581
- Plasmodium**
- book 2259
- control of, vector control for 5, 2372, 2380
- in
- Anopheles* spp., infectivity of 405
- A. culicifacies*, in Delhi 3222
- A. darlingi*, transmission of 326
- A. nuneztovari*, transmission of 326
- Culicidae, transmission of 3284
- man, in Pakistan 617
- vectors of 2801, 3194
- virus-like inclusions in 142
- Plasmodium berghei**
- in
- Anopheles gambiae*, infectivity of, genetics of 616
- A. stephensi*
- effects of sulfadoxine on 90
- effects on amino acids of 1199
- increasing susceptibility to bacteria 3197
- pathogenicity of 1198
- Plasmodium cynomolgi**
- in
- Anopheles stephensi*, development of 680
- A. sundaius*, transmission of 2058
- Macaca umbrosus*, in Andaman and Nicobar Islands 2058
- man, in Andaman and Nicobar Islands 2058
- Plasmodium falciparum**
- drug resistance in, in Brazil 1767
- in
- Anopheles* spp.
- infectivity of 405
- transmission of 2128
- A. freeborni*, infectivity of 618
- A. gambiae*, infectivity of, through membranes 1549
- A. koliensis*, in Irian Jaya 1776
- A. pseudopunctipennis*, not infective 843
- A. punctulatus*, in Irian Jaya 1776
- man
- in Andaman and Nicobar Islands 2058
- in Brazil 1767
- in France 3198
- in Irian Jaya 1776
- in Rajasthan 572
- in Saudi Arabia 623
- vectors of 572
- Plasmodium gallinaceum**, in, *Aedes aegypti*, development of 2624, 3196
- Plasmodium hermani**
- in
- Culex nigripalpus*, in Florida 837
- turkeys, in Florida 837



- Plasmodium inui**  
in  
  *Anopheles takasagoensis*, transmission of 2070  
  monkey, in Taiwan 2070
- Plasmodium malariae**, in, man, in Andaman and Nicobar Islands 2058
- Plasmodium simium**  
in  
  *Anopheles* spp., infectivity of 576  
  *Aotus trivirgatus*, infectivity of 576
- Plasmodium vivax**  
in  
  *Anopheles* spp.  
    development of 1041  
    infectivity of 834  
    transmission of 2128  
  *A. albanus*, infectivity of 2896  
  *A. balabacensis*, infectivity of 2896  
  *A. culicifacies*, infectivity of 2896  
  *A. freeborni*, transmission of 2896  
  *A. maculatus*, transmission of 834, 2896  
  *A. pseudopunctipennis*, not infective 843  
  man  
    in Andaman and Nicobar Islands 2058  
    in France 3198  
    in Saudi Arabia 623  
  vectors of 1552
- Plasmodium yoelii**  
gametocytes of 57  
in  
  *Anopheles* spp., infectivity of 57  
  *A. gambiae*  
    loss of infectivity of 824  
    not affected by insecticides 824  
    pathogenicity of 824  
  *A. stephensi*  
    effects of 4-aminobenzoic acid on 90  
    not affected by insecticides 824  
    transmission of, effects on virulence of 610
- Platanus**, Ceratopogonidae in holes in, in Spain 129
- Platyhelminthes** 3148  
in, man, book 1153
- Platyhelminths**, index-catalogue 3148
- platypalpus**, *Myrmarachne*
- Plecia nearctica**  
in Mexico 212  
mating in 212
- Plecoptera**  
in rivers  
  as indicators of effects of insecticides 1292  
  effects of methoxychlor on 1281  
  methoxychlor in, toxicity of 2980
- Pleistophora**, in, Simuliidae, in Guatemala 144
- Pleistophora culicis**, against, *Culex quinquefasciatus* 3136
- Pleistophora debaisieuxi**  
in  
  Simuliidae  
    in Guatemala 144  
    in Ukraine 1059  
  *Simulium* spp., in German Federal Republic 1268
- Pleistophora multispora**  
in  
  Simuliidae, in Guatemala 144  
  *Simulium* spp., in German Federal Republic 1268
- Pleistophora simulii**  
in  
  Simuliidae, in Ukraine 1059  
  *Simulium* spp., in German Federal Republic 1268
- Pleistophora turgenea**, taxonomy of, transferred to *Diffingera* 1890
- pleskei**, *Neopsylla*
- Plifenat** (see Benzenemethanol, 3,4-dichloro- $\alpha$ -(trichloromethyl)-, acetate)
- Ploceidae**  
arthropod parasites of, in Kirghizia 1033  
bacteria in, in Kirghizia 1033
- Plodia interpunctella**, control of, growth regulators for 1453
- Plotox** (see Lindane, with trichlorophen)
- plumbeum**, *Hyalomma* (see *H. marginatum*)
- plumbeus**, *Anopheles*
- plumosus**, *Chironomus*
- pluridens**, *Cheyletus*
- pluvialis**, *Haematopota*
- pluvialis**, *Hybomitra*
- Plywood**, *Dermestes maculatus* in, damage caused by 3057
- Poecilia reticulata**  
food preferences in 3213  
preying on  
  *Culex quinquefasciatus* 3213  
  Culicidae, and biological control using, in polluted water 2094  
  *Tubifex tubifex* 3213  
  temperature requirements of 2094
- Pogonomyrmex**, venoms of, toxicity to mouse of 2205
- Pogonomyrmex badius**, venom of 231
- Pogonomyrmex barbatus**, venom of 231
- Pogonomys macrourus**, *Laelaps* spp. on, in Papua New Guinea 1416
- Poland**  
  *Ceratophyllus gallinae* in, on fowl 2564  
  *Chaetopsylla matina* in, on *Martes* 51  
  Chironomidae in 1917  
  *Conchapelopia melanops* in, natural enemies of 679  
  *Dermacentor reticulatus* in 238  
  *Dermanyssus gallinae* in, on fowl 2564  
  *Goniocotes gallinae* in, on fowl 2564  
  *Lucilia sericata* in, on sheep 2707  
  *Menacanthus stramineus* in, on fowl 2564  
  *Menopon gallinae* in, on fowl 2564  
  *Mustela* spp. in, arthropod parasites of 323  
  *Natarsia punctata* in, natural enemies of 679  
  *Neopodocin mrciaki* in, on  
    *Clethrionomys* 729  
  plague prevention in 50  
  *Polyplax reclinata* in, on *Crocidura* 557  
  Scarabaeidae in 3054  
  Simuliidae in 2391  
    on aquatic plants 2394  
  *Uropoda orbicularis* in, on small mammals 1655
- Polistes**  
common names of 2457  
on man  
  hypersensitivity to 1930  
  diagnosis of 2455  
  venoms of 1930, 2455  
*Polistes foederatus*, in Malta (?) 1384  
*Polistes gallicus*, in Malta 1384  
Polistinae, in British Isles 691
- Pollenia**  
in Thailand 662  
landing reaction in, ocelli, dark adaptation and 2179
- Pollenia pectinata**, in China 214
- Pollenia rudis**  
in USA 1346  
landing response in 823
- Polleniopsis**, in Thailand 662
- Pollinators**, pesticides in, non-target effects of 1987
- polonicus**, *Acanthophthirius*
- Polycitenidae**, combs in, functions of 2309
- Polyethylene glycol** (see Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy-)
- Polygalacturonase**, in *Haematobia irritans* gut 3369
- Polygenis**  
on Rodentia  
  in Argentina 321, 357  
  in Brazil 1751
- Polygenis nitidus**  
in Brazil 1751  
on *Proechimys*, in Brazil 1751
- Polygenis tripus**  
Allantonematidae in, in Brazil 3185  
in Brazil 3185  
on *Zygodontomys lasiurus*, in Brazil 3185
- Polygonum pennsylvanicum**, *Aedes vexans* oviposition sites associated with 2612
- polynesiensis**, *Aedes*
- Polyoxin D**  
in *Stomoxys calcitrans*  
  inhibiting chitin synthase 1901  
  inhibition of chitin synthesis by 452
- Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy-**, in *Musca domestica*, permeability of Malpighian tubules to 3029
- Polypedilum**, in California 2118
- polyphemus**, *Limulus*
- Polyplax asiatica**  
in Burma 1496  
on *Bandicota bengalensis*, in Burma 1496
- Polyplax borealis**  
in USSR 2571  
on small mammals, in USSR 2571
- Polyplax opimi**  
sp. nov., description of 341  
in USSR 341  
on *Rhombomys opimus*, in Tadzhikistan 341
- Polyplax paradoxa**, taxonomy of, characters distinguishing *P. opimi* and 341
- Polyplax reclinata**  
in Burma 1496  
in Poland 557  
on *Crocidura leucodon*, in Poland 557  
on *Suncus murinus*, in Burma 1496
- Polyplax serrata**  
in USSR 2571  
on small mammals, in USSR 2571
- Polyplax spinulosa**  
in Burma 1496  
on rat, effects of riboflavin on susceptibility to 1179  
on small mammals, in Burma 1496
- Polystyrene** (see Benzene, ethenyl-, homopolymer)
- Polyurethanes** (see Urethane polymers)
- Poly(vinyl chloride)** (see Ethene, chloro-, homopolymer)
- pomerantzevi**, *Ixodes*
- pomeranzevi**, *Neotrombicula*
- pomposa**, *Tipula*
- pomposum**, *Amblyomma*
- Ponds**  
  *Aedes* spp. in, in Finland 2957  
  *Chaoborus astictopus* in, distribution pattern of 2414  
  *Culex quinquefasciatus* in, sampling of 2116  
  Culicidae in  
    effects of aquatic plants on 1243  
    in Missouri 3211  
    plant associations of 384  
  Culicinae in, in Nigeria 602  
  *Cyprinodon macularius* in, effects on ecosystem of 1543  
  diflubenzuron in, residues of 2109  
  emergence trap for use in 3252  
  *Gambusia affinis* in, effects on ecosystem of 1543  
  insect growth regulators in, non-target effects of 3013, 3024  
  midge control in, insect growth regulators for 2412  
  mosquito control in 3207, 3208  
  predatory insects in, effects of aquatic plants on 1243
- Ponds, garden**, mosquito control in, *Bacillus thuringiensis* for 1798
- Ponds, temporary**, *Aedes* spp. in, sampling of 1811
- pontifica**, *Suidasia*
- pontiger**, *Haemogamasus*
- Pools**  
  *Anopheles subpictus* in, in Indonesia 1777  
  *Culex quinquefasciatus* in, in Tamil Nadu 2600  
  Culicidae in  
    in Hokkaido 3271  
    productivity of 2958
- Pools, rock**, *Aedes togoi* in, in Washington State 2927
- Pools, snow**  
  *Aedes* spp. in, in Hokkaido 3271  
  *A. communis* in, in Hokkaido 603  
  *A. punctator* in, in Hokkaido 603
- poppei**, *Typhloceras*
- Population dynamics**  
  asymmetrical competition in insects 2282  
  model 1369  
  time-delay model of laboratory insect populations 669
- porcinus**, *Ornithodoros moubata*

- Porocephalus crotali**, on *Crotalus atrox*, development of 2500
- Porrius pacificus**  
in New Zealand 2312  
on bat, in New Zealand 2312
- portentosa**, *Gromphadorhina*
- Portugal**  
*Culiseta longiareolata* in 1532  
Phlebotominae in 1843  
*Spilopsyllus cuniculi* in, on rabbit 2336  
Tabanidae in 451  
*Tabanus darimonti* in 3368  
*Xenopsylla cunicularis* in, on rabbit 2336
- postfoliatum**, *Leptotrombidium*
- posticatum**, *Simulium*
- posticus**, *Eublaberus*
- Potamogeton**, *Simulium penobscotensis* associated with, in Maine 1848
- Potamogeton pectinatus**, *Tilapia zillii* on, and biological control using, in California 2345
- Potassium**  
in *Calliphora vicina*, recycling in rectum of 2175  
in *Nauphoeta cinerea* salivary glands, transport of 333  
in rat, levaterenol release caused by 3115  
in rat salivary glands, *Tityus serrulatus* venom stimulating secretion of 2780  
in *Simulium* breeding water 2666
- Potassium cyanide**, in *Musca domestica*, reversing tyrosinase inhibition of aldrin epoxidase 1371
- Potassium hydroxide**, in Simuliidae, morphological changes caused by 1846
- Potato** (*Solanum tuberosum*)  
*Periplaneta americana* on, feeding by 28  
Potato (stored tubers), naled in, uptake from air of 2266
- Potos flavus**, *Lutzomyia umbratilis* on, in French Guiana 2969
- potteri**, *Geomydoecus*
- Poultry**  
carbaryl in, toxicity of 32  
diazinon in, toxicity of 1718  
ectoparasites of 2837  
in Philippines 2813  
*Goniocotes gallinae* on, in Haryana 32  
lindane in, residues of 2509  
malathion in, toxicity of 32  
Mallophaga on, in Spain 340  
*Menopon gallinae* on, in Haryana 32  
*Ornithonyssus sylviarum* on, in Israel 290  
pest control on, *Bacillus thuringiensis* for 1048  
tick-borne bacteria in, pathogenicity of 247  
4-74 in, toxicity of 1718
- Poultry dung**  
*Alphitobius diaperinus* in, in England 486  
*Carcinops pumilio* in, in England 486  
Coleoptera in, in North Carolina 226  
*Dermestes maculatus* in, development of 3057  
in England 486  
*Musca domestica* in, in Hawaii 480  
*M. sorbens* in, in Hawaii 480
- Poultry eggs**, lindane in, residues of 2509
- Poultry farms**  
fly control in, baits for 3017  
*Musca domestica* in, in Turkey 3017  
*Stomoxys calcitrans* in, in USA 904
- Poultry feed**  
*Musca domestica* larval meal as component of 1623  
*Phormia terraenovae* larval meal as component of 1623
- Poultry housing**  
arthropod fauna of, in England 1717  
*Dermestes maculatus* in, damage caused by 3057  
*Lutzomyia intermedia* in, in Brazil 2970  
pest control in 3057  
insecticide duster for 1601
- Poultry-waste lagoons**  
insect fauna of, effects of organic pollution on 1814  
pest control in 1814
- Powassan virus**, tick transmission of 3137
- powelli**, *Amyrsidea*
- Poxviridae**  
in  
*Chironomus decorus*, transovum transmission of 448  
invertebrates, review 525
- Praomys natalensis**  
*Ixodes calcarhebes* on, in Zambia 249  
*Oestromyia leporina* on, effects of 1336  
Siphonaptera on, in Tanzania 2030
- Precipitin tests**  
for identifying insects in predator guts 1483  
for identifying Triatomine blood-meals 2576  
in predator-prey studies, review 1482
- Precocene I** (see 2*H*-1-Benzopyran, 7-methoxy-2,2-dimethyl-)
- Precocene II** (see 2*H*-1-Benzopyran, 6,7-dimethoxy-2,2-dimethyl-)
- Predator-prey interactions**, book 3146
- Pregn-4-ene-3,20-dione** (see Progesterone)
- primaris**, *Amphipsylla*
- Primates**, Phlebotominae on, in Panama 2150
- Primulin**, marker for, Siphonaptera 360
- Prince Edward Island**, Ixodoidea in, on small mammals 720
- Procladius**  
in California 2118  
in flood-control systems, in California 2413  
preying on  
Chironomidae, in Poland 1917  
Entomostraca, in Poland 1917  
Oligochaeta, in Poland 1917  
temephos resistance in, in California 2413
- Procladius crassinervis**  
in Japan 1624  
in rice-fields, effects of fertilizers on 1624
- Procladius sublettei**  
emergence in 1905  
in USA 1905
- Proctolaelaps**, in rodent nests, in Transbaikalia 1032
- Proctolin**  
in insects, book 3144  
in *Lucilia sericata*, membrane depolarisation caused by 211  
in *Periplaneta americana*, activity of analogues of 1487  
in *Tabanus proximus*, effects on oviduct contractions of 3341
- Procyon lotor**  
*Dermacentor variabilis* on, in Connecticut 248  
*Ursicoptes procyoni* on, in Iowa 737
- procyoni**, *Ursicoptes*
- Proechimys**  
*Lutzomyia umbratilis* on, in French Guiana 2969  
Siphonaptera on, in Brazil 1751
- Proechimys cuvieri**, *Leishmania* spp. in, in French Guiana 1154
- Profenofos** (O-(4-bromo-2-chlorophenyl) O-ethyl S-propyl phosphorothioate)  
against  
*Culex pipiens* 761  
*Musca domestica* 761  
anticholinesterase activity of 761  
in mouse, toxicity of 761  
selective toxicity of 761
- Progesterone** (pregn-4-ene-3,20-dione)  
in cattle, effects of *Stomoxys calcitrans* on 1131
- Proline oxidase** (see Reductase, pyrroline-5-carboxylate)
- L-Proline**  
in *Aedes togoi*, utilisation by *Brugia patei* of 68  
in *Aldrichina grahami*, synthesis from glutamate of 684  
in *Anopheles atroparvus*, utilisation by *Brugia patei* of 68  
in *Anopheles stephensi*, effects of *Plasmodium berghei* on 1199  
in *Cochliomyia macellaria*, glutamate product during anaerobic metabolism 1359  
in *Culex pipiens*, effects of *Romanomermis culicivora* on 1229
- prolixus**, *Rhodnius*
- Promecarb** (3-methyl-5-(1-methylethyl)phenyl methylcarbamate)  
against, *Culex molestus* 401  
on walls, persistence of 401
- Promuricheyla lukoschusi**  
gen. et sp. nov., description of 2480  
in Philippines 2480  
on *Nannosciurus surrutilis*, in Philippines 2480
- Propanal**, attractant for, *Glossina* spp. 1881
- Propanamide**, N-[2-amino-3-nitro-5-(trifluoromethyl)phenyl]-2,2,3,3-tetrafluoro-, against, *Boophilus microplus*, on cattle 975
- 1,2-Propanediol**, 3-(2-methoxyphenoxy)-, 1-carbamate (see Methocarbamol)
- 1,3-Propanediol**, 2-butyl-2-ethyl-, with N-butyl-N-phenylacetamide, and phenylmethyl benzoate, repellent for, *Amblyomma americanum*, on man 1937
- 1,2,3-Propanetricarboxylic acid**, 2-hydroxy-, in *Cochliomyia macellaria*, decreasing during anaerobic metabolism 1359
- Propanoic acid**, *Culex* oviposition responses to 1209
- Propanoic acid**, 2-hydroxy- (lactic acid)  
in *Heterometrus fulvipes*, during anoxia 2494
- Propanoic acid**, 2-methyl-  
*Culex* oviposition responses to 1209  
ineffective as flushing agent for  
*Panstrongylus megistus* 1507
- 2-Propanol**, against, *Sternostoma tracheacolum*, on canary 1413
- 2-Propanone**, attractant for, *Glossina* spp. 1881, 2997
- 2-Propenoic acid**, 3-(3,4-dihydroxyphenyl)-, in *Musca domestica*, effects on pupariation of 188
- Propetamphos** (1-methylethyl (E)-3-[(ethyldamino)methoxyphosphinothioyl]oxy)-2-butenate)  
against  
*Culex molestus* 401  
Ixodoidea 757  
*Lucilia cuprina* 757  
*Psoroptes ovis* 757  
on walls, persistence of 401
- Propionic acid** (see Propanoic acid)
- Propoxur** (2-(1-methylethoxy)phenyl methylcarbamate)  
against  
*Aedes aegypti* 2640  
*A. vexans* 2040  
*Anopheles annularis* 1775  
*A. arabiensis*, in dwellings 829  
*A. culicifacies* 1775, 3218  
*A. gambiae*, in dwellings 829  
*A. nigerrimus* 1775  
*A. pulcherrimus* 1775  
*A. stephensi* 1775, 2640  
*A. subpictus* 1775, 2640  
*Armigeres subulbatus* 2640  
Blattaria 788  
*Blattella germanica* 771  
*Ctenocephalides felis*, on dog 2028  
*Culex molestus* 401  
*C. pipiens* 2040  
*C. quinquefasciatus* 2353, 2640  
*C. sitiens* 2640  
*C. tritaeniorhynchus* 2640  
*C. whitmorei* 2640  
Culicidae 1712  
*Musca domestica* 3018  
*Pediculus capitis* 345  
*Periplaneta americana* 23, 1681  
Triatominae, in dwellings 1137  
in Calliphoridae, relation of microsomal oxidase and tolerance to 2712  
in flea collars 2028  
on building materials, persistence of 203, 771  
on walls, persistence of 401  
N-phenylsulfonyl derivatives of, insecticidal activity of 2265  
resistance to, in *Culex quinquefasciatus*, development and loss of 2110  
synergists for, piperonyl butoxide as 2712
- propria**, *Schoengastia*



- Prosimuliini**  
maxillary sensilla in 3309  
taxonomy of 1846
- Prosimulium**  
control of, biological 3313  
in Transbaikalia 1067  
in streams, in Newfoundland 3313  
maxillary sensilla in 3309
- Prosimulium alpestre** (see *Ahaimophaga alpestris*)
- Prosimulium hirtipes**  
habitats of 1076  
in USSR 1076  
overwintering in 1076
- Prosimulium hydroides**  
habitats of 1076  
in USSR 1076  
overwintering in 1076
- Prosimulium karibaense**  
sp. nov., description of 1583  
in Japan 1583  
on man, in Hokkaido 1583
- Prosimulium mixtum**  
control of, repellents for, evaluating of 1856  
fecundity in, effects of blood-feeding on 640  
feeding behaviour in 425, 639  
host preferences in 639  
in USA 425  
Mermithidae in, specificity of 643  
on man, in Maine 425
- Prosimulium subitbelesi**  
sp. nov., description of (in *Twinnia*) 2665  
in Japan 2665  
on birds, in Hokkaido 2665
- Prosimulium yezoense**  
descriptions of 1583  
taxonomy of, characters distinguishing *P. karibaense* and 1583
- Prostaglandin E<sub>1</sub>**  
in *Androctonus australis*, effects on temperature preferences of 3116  
in *Buthus occitanus*, effects on temperature preferences of 3116
- Prostaglandins**, in *Boophilus microplus* saliva 263
- Prosthogonimus ovatus**, vectors of 316
- Protaetia fusca**  
in Japan 3382  
in Philippines 3382  
in goat dung, in Bonin Islands 3382
- Protective atmospheres**, for  $\gamma$ -irradiation of *Glossina* 1100
- Protective clothing**  
against *Amblyomma americanum* 1937  
against pesticides 1684  
against ticks 1946
- Proteinase**  
in *Aedes aegypti* mid-gut 1527  
in *Bacillus thuringiensis* formulations, removal of 1536  
in *Culex pipiens* hemolymph, effects of *Romanomeris culicivora* on 1227  
in *Haematobia irritans* gut 3369  
in *Leucophaea maderae* mid-gut, properties of 1489  
in *Rhodnius prolixus* mid-gut 810  
in *Stomoxys calcitrans* mid-gut, effects of trypsin inhibitor on 2437
- Proteinase inhibitor**  
in *Boophilus microplus* 960  
in *Leucophaea maderae* mid-gut 1489
- Proteins**  
in *Aedes aegypti*, incorporation of dietary amino acids into 2047  
in *Aedes aegypti* accessory glands, synthesis of 2602  
in *Aedes aegypti* Malpighian tubules, not affected by *Dirofilaria repens* 101  
in *Aedes aegypti* ovaries 91  
in *Aedes atropalpus* ovaries 91  
in arthropod cuticle, techniques, book 3131  
in *Bos taurus*  $\times$  *B. indicus* serum, effects of *Chrysomya bezziana* on 663  
in *Calliphora vicina*  
developmental changes in 1916  
effects of methoprene on synthesis of 3354  
effects of moulting hormones on synthesis of 3354
- Proteins contd.**  
in *Calliphora vicina* hemolymph, developmental changes in 882  
in *Centruroides limpidus* venom 522  
in *Cimex hemipterus* mycetocytes 2301  
in *Culex nigripalpus* ovaries 91  
in *Culex pipiens* hemolymph, effects of *Romanomeris culicivora* on 1227, 1229  
in *Culex pipiens* ovaries 407  
in *Glossina morsitans* fat-body, synthesis during pregnancy of 1094  
in *Glossina morsitans* milk glands, synthesis during pregnancy of 1094  
in *Haematobia irritans* ovaries 898  
in *Haematopota pluvialis* salivary glands, sex differences in 187  
in *Heterometrus scaber* venom 3434  
in *Leucophaea maderae* ovaries, synthesis of 2558  
in *Lucilia sericata* diet, effects on neurosecretory system of 3358  
in *Musca autumnalis* diet, effects on nematode development of 3025  
in *Musca domestica* eggs, effects of  $\gamma$ -irradiation on 478  
in *Musca domestica* larvae, effects of diet on 1364  
in *Periplaneta americana*, effects of thermal acclimation on 1490  
in *Periplaneta americana* antennae 3153  
in *Periplaneta americana* brain, diel changes in 799  
in *Periplaneta americana* ovaries, effects of chemosterilants on 1165  
in *Rhodnius prolixus* accessory glands, regulation of accumulation of 3170  
in *Rhodnius prolixus* saliva 1509  
in *Sarcophaga bullata* hemolymph, effects of abscisic acid on 3360  
in sheep fleece, role in fleece rot and fly strike of 174  
in sheep plasma, *Lucilia cuprina* causing leakage to skin surface of 3039  
in Vespid venoms 3381
- Proteus**  
in *Blatta orientalis*, in UK 3157  
*Cochliomyia hominivorax*, role in life-cycle of 1920  
Diptera, in Brazil 479
- Protocalliphora**  
on birds, in USSR 1021  
in *Turdus iliacus*, in USSR 2708
- Protomyobia nepalensis**  
sp. nov., description of 1004  
in Nepal 1004  
on *Soriculus nigrescens*, in Nepal 1004
- Protophormia terraenovae** (see *Phormia terraenovae*)
- Protozoa**  
book 2259  
in  
Culicidae, review 1783  
insects  
defence mechanisms against 544  
review 3136  
invertebrates, role in population dynamics of 2839  
man, book 1153  
medically-important arthropods, bibliography 2517  
Tabanidae, in USSR 3040  
index-catalogue of 1118  
insect control using 3118  
non-target effects of 2258  
review 1539, 1680, 3136
- Provespa**, check-list of 484
- Prowichmannia spinifera**, in USSR 1053
- proximus**, *Tabanus*
- Prunella modularis**, famphur in, toxicity of 3009
- Prurigo**, in man, caused by Culicidae 1764
- Pruritus**  
in cat, caused by *Ctenocephalides felis* 363  
in cattle, caused by *Psoroptes ovis* 3427  
in dog, caused by *Ctenocephalides felis* 363  
in guinea-pig, caused by *Trixacarus caviae* 510  
in man  
caused by arboviruses 1947
- Pruritus contd.**  
in man contd.  
caused by *Cheyletiella* 983, 1965  
caused by Culicidae 1764  
caused by *Demodex* 726  
caused by ectoparasites from pet animals 1417  
caused by *Oeciacus vicarius* 44  
caused by *Ornithodoros amblus* 275  
caused by *Pthirus pubis* 348  
caused by *Pyemotes ventricosus* 1657  
caused by *Pyemotes zwoelferi* 1967  
caused by *Sarcoptes scabiei* 3417  
in pig, caused by *Haematopinus suis* 985  
in *Zalophus californianus*, caused by *Orthohalarachne diminuta* 1423
- Przhevalskiana**, in Tadzhikistan 154
- Psacadina verbekei**, in France 1349
- pseudagyrtes**, *Ctenophthalmus*
- pseudarctomys**, *Opisodasys*
- Pseudarmigeres**, in tree holes, in Kenya 2876
- pseudequinum**, *Simulium*
- Pseudogaurax lancifer** (see *Mimogaurax lancifer*)
- Pseudolynchia canariensis**, in Saudi Arabia 2533
- pseudomaculata**, *Triatoma*
- Pseudomonas**  
in  
Diptera, in Brazil 479  
sheep fleece, role in fleece rot and fly strike of 174
- Pseudomonas aeruginosa**  
control of,  $\gamma$ -irradiation for 1093  
in, *Rhyzopertha dominica* 1633
- Pseudomonas pyocyanea**  
in  
*Argas persicus*, in Pakistan 247  
poultry, pathogenicity of 247
- Pseudomys**, *Laelaps elegans* on, in Western Australia 1653
- Pseudomys albocinereus**, *Laelaps bycalis* on, in Western Australia 508
- Pseudomys occidentalis**, *Laelaps janalis* on, in Western Australia 508
- Pseudomys praeconis**, *Laelaps lybacia* on, in Western Australia 508
- pseudoobscura**, *Drosophila*
- pseudopunctipennis**, *Anopheles*
- Pseudoscorpiones**  
mounting media for 1149  
on *Neotomodon*, in Mexico 1458
- pseudoscutellaris**, *Aedes*
- Pseudosmittia**  
on *Rhododendron*, in Pennsylvania 3359  
sugar-feeding in 3359
- pseudotenuicollis**, *Arrenurus*
- pseudotitillans**, *Mansonella*
- Pseudovespula germanica** (see *Vespula germanica*)
- pseudovishnui**, *Culex*
- Psilus gestroi**  
in Romania 453  
parasitising, *Lucilia sericata*, in Romania 453
- Psocoptera**, overwintering of, in birds' nests 2005
- Psorergatoides**, key 736
- Psorergatoides desmodus**  
sp. nov., description of 736  
in French Guiana 736  
on *Desmodus rotundus*, in French Guiana 736
- Psorergatoides guyanensis**  
sp. nov., description of 736  
on *Rhinophylla pumilio* 736
- Psorergatoides peropteryx**  
sp. nov., description of 736  
in French Guiana 736  
on *Cormura brevirostris*, in French Guiana 736  
on *Peropteryx macrotis*, in French Guiana 736
- Psorergatoides surinamensis**  
sp. nov., description of 736  
on *Tonatia nicaraguae* 736
- Psorophora**  
control of, biological 1537  
in Argentina 400  
in Canada 1533  
in Cuba 849  
in Quebec 2881

- Psorophora columbiae**  
control of 3278  
biological 376, 2084  
insecticides for 78, 1193, 2111  
in USA 375, 376, 1193, 2084, 2111, 2910, 3278  
in fallow fields, mapping of 3278  
in rice-field levees, egg horizons of 375  
in rice-fields  
in Arkansas 376, 1193  
mapping of 3278  
in salt marshes, in South Carolina 2910  
surveillance for 3278
- Psorophora cyanescens**, in USA 385
- Psorophora ferox**  
in USA 1208  
on man, in Connecticut 1208  
sugar-feeding in 1208
- Psoroptes**  
control of  
acaricide applicators for 740  
acaricides for 728, 2837, 3349  
gnathosoma in, functional morphology of 929  
on goat, in Fiji 1658  
on rabbit 740  
on zebu, in Malaysia 2538
- Psoroptes communis ovis** (see *P. ovis*)
- Psoroptes cuniculi**  
amino acids in 2486  
control of  
acaricides for 504, 998, 2248, 2487, 2488, 2687  
growth regulators for 2767  
in Australia 3091, 3105  
in Indonesia 2806  
in Mexico 2774  
in Upper Volta 2687  
on goat, in New South Wales 3105  
on horse, in Queensland 3091  
on rabbit  
in Indonesia 2806  
in Mexico 2774  
in Upper Volta 2687
- Psoroptes equi cuniculi** (see *P. cuniculi*)
- Psoroptes hippotis** (see *P. cuniculi*)
- Psoroptes ovis**  
amino acids in 2486  
control of 2524  
acaricides for 285, 503, 504, 757, 998, 2487, 2488, 2837, 3101  
legislation for 285  
in Indonesia 2806  
in Iran 503  
in Lesotho 285  
in UK 3101  
in USA 2524, 3427  
on Asian buffalo, in Indonesia 2806  
on cattle, effects of grooming on 3427  
on sheep  
in Iran 503  
in Lesotho 285  
in UK 3101  
in Wyoming 2524  
outbreaks of 285  
seasonal abundance of 3427
- Psychoda alternata**  
competing with, *Metriocnemus hydropetricus* 2719  
in Italy 896  
in USA 1814  
in animal waste lagoons, effects of organic pollution on 1814  
rearing of, techniques for 2719  
vertical distribution of 896
- Psychoda grisescens**  
in Italy 896  
vertical distribution of 896
- Psychoda phalaenoides**  
in Italy 896  
vertical distribution of 896
- Psychoda severini**  
in Italy 896  
rearing of, techniques for 2719  
vertical distribution of 896
- Psychodidae**  
*Culicinympes clavosporus* in, defence mechanisms against 1829  
in Colombia 2661  
in Italy 896  
in Nearctic region, book 2587  
pathogens of, bibliography 2517
- Psychodidae contd.**  
preyed on by  
*Myrmarachne platypalpus*, in Punjab 793  
*Scathophaga stercoraria*, in UK 1927
- Psychodinae**, in Kenya 1551
- Psychodopygus amazonensis** (see *Lutzomyia amazonensis*)
- Psychodopygus davisii** (see *Lutzomyia davisii*)
- Psychodopygus intermedius** (see *Lutzomyia intermedia*)
- Psychodopygus llanosmartinsi** (see *Lutzomyia llanosmartinsi*)
- Psychodopygus paraensis** (see *Lutzomyia paraensis*)
- Psychomotor agitation**, in Asian buffalo, caused by *Haematopinus tuberculatus* 2250
- Pteracarus minutus daubentoni**  
in Netherlands 734  
on *Myotis dasycneme*, in Netherlands 734
- 4,7(1H,8H)-Pteridinedione, 2-amino-**, in *Lucilia cuprina* head, developmental changes in 192
- 4(1H)-Pteridinone, 2-amino-**, in *Lucilia cuprina* head, developmental changes in 192
- 4(1H)-Pteridinone, 2-amino-7,8-dihydro-6-(2-hydroxy-1-oxopropyl)-, (S)-**, in *Lucilia cuprina* head, developmental changes in 192
- Pterin** (see 4(1H)-Pteridinone, 2-amino-)
- Pterodectes**, on Passeriformes, in New Zealand 801
- Pterodex carolliae**  
gen. et sp. nov., description of 1001  
in Suriname 1001  
on *Carollia perspicillata*, effects of 1001
- Pteromalidae**, parasitising, Tabanidae, in France 659
- Pteromychirus**, gen. nov., description of 2770
- Pteromychirus lukoschusi**, taxonomy of, transferred from *Tamiopsochirus* 2770
- pteronyssinus, Dermatophagoides**
- Pteronyssoides**, on Passeriformes, in New Zealand 801
- Pthirus pubis**  
biology of 34, 1174  
control of 1142, 1147, 1174  
insecticides for 34, 348, 1176  
descriptions of 34  
epidemiology of 1174  
in Switzerland 1174  
in Thailand 2814  
in UK 1142, 1147  
in USA 348, 1176  
on man  
effects of 34  
in England 1147  
in Pennsylvania 1176  
in Switzerland 1174  
in UK 1142  
on eyelashes 2814  
on head 348  
taxonomy of, characters distinguishing *Pediculus* and 34
- Ptinidae**, preyed on by, *Loxosceles reclusa*, in Iowa 3430
- Ptychopteridae, Culicinomyces clavosporus**  
in, defence mechanisms against 1829
- Ptyonoprogne rupestris, Ceratophyllus nanshanensis** on, in China 819
- pubis, Pthirus**
- Puddles, Culicidae** in, in Missouri 3211
- Puerto Rico**  
*Aedes aegypti* in 2136  
in cemeteries 3247  
*Latrodectus geometricus* in 3429  
*L. mactans* in, natural enemies of 3429  
*L. variolus* in 3429
- pugilator, Uca**
- pulchellus, Atylotus**
- pulchellus, Rhipicephalus**
- pulcherrimus, Anopheles**
- pulchritarsis, Aedes**
- Pulex irritans**  
distribution of 2313  
hosts of 2313  
in Burundi 49  
in UK 1139
- Pulex irritans contd.**  
in dwellings, in Burundi 49  
medical importance of 2313
- Pulex simulans**  
distribution of 2313  
hosts of 2313
- Pulex sinoculus**, on *Orthogeomys grandis* 2313
- pulicaris, Culicoides**
- Pulmonary edema**, in man, caused by scorpion stings 2256
- pumilio, Carcinops**
- pumilio, Rhipicephalus**
- pumilis, Culicoides**
- punctata, Diploptera**
- punctata, Haemaphysalis**
- punctata, Natarsia**
- punctata, Pherbellia**
- punctatum, Anobium**
- punctatus, Culicoides**
- puncticollis, Scarabaeus**
- punctipennis, Anopheles**
- punctodes, Aedes**
- puncator, Aedes**
- Punctoribates hexagonus**  
Anoplocephalata in, in USSR 1081  
in USSR 1081
- Punctoribates punctum**  
Anoplocephalata in, in USSR 1081  
in USSR 1081
- punctulatus, Anopheles**
- punctum, Punctoribates**
- pungens, Tabanus**
- Punta Salinas virus**, in, *Ornithodoros amblyus*, in Peru 275
- 1H-Purin-6-amine**, in *Musca domestica*, effects on pupariation of 188
- 1H-Purine-2,6-dione, 3,7-dihydro-**, in *Musca domestica*, effects on pupariation of 188
- 1H-Purine-2,6-dione, 3,7-dihydro-1,3-dimethyl-**, in *Musca domestica*, effects on pupariation of 188
- 1H-Purine-2,6-dione, 3,7-dihydro-3,7-dimethyl-**, in *Musca domestica*, effects on pupariation of 188
- 1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl-**, in *Periplaneta americana*, potentiating activation of phosphorolase by cyclic AMP 336
- 1H-Purine-2,6,8(3H)-trione, 7,9-dihydro-** in *Aedes aegypti* excreta 2076  
determination of 1564  
in *Musca domestica*, effects on pupariation of 188
- purpureus, Rhinoceros**
- purus, Culicoides**
- pusilla, Schoenbaueria** (see *Simulium pusillum*)
- pusillum, Simulium** (*Schoenbaueria*)
- putoria, Chrysomya** (see *C. chloropyga*)
- putoria, Chrysomya chloropyga** (see *C. chloropyga*)
- putrescentiae, Tyrophagus**
- PVC** (see Ethene, chloro-, homopolymer)
- pyncostictus, Culicoides**
- Pyemotes tritici**  
on man, dermatitis caused by 769  
parasitising  
*Solenopsis invicta*  
and biological control using  
in Florida 3384  
in Georgia (USA) 3384
- Pyemotes ventricosus**  
biology of 1657  
in Singapore 1657  
on man, dermatitis caused by 1657  
parasitising, *Anobium punctatum*, in Singapore 1657
- Pyemotes zwoelferi**  
biology of 1967  
descriptions of 1967  
in Yugoslavia 1967  
in dried flowers, imported into France 1967  
on man, dermatitis caused by 1967
- Pygiopsylla**, taxonomy of 2306
- Pygiopsylla celebensis**, taxonomy of, transferred to *Farhangia* 2306
- Pygiopsyllidae**, taxonomy of 2306
- pygmaeus, Cercyon**
- Pygmephoridae**, in mammal nests, in USSR 1053



- Pygmephorus**  
in mammal nests, in USSR 1053  
on *Scapanus townsendi*, in Oregon 289
- Pygmephorus designatus**  
(see *Phenylbutazone*)  
in USA 509  
on *Sorex trowbridgii*, in Oregon 509
- 2H-Pyran-2-one, 5,6-dihydro-3-hydroxy-4-pentyl-, repellent for, *Aedes aegypti*** 1525
- 3,5-Pyrazolidinedione, 4-butyl-1,2-diphenyl-**  
(see *Phenylbutazone*)
- Pyrellia**, in Norway 881
- Pyrellia cadaverina**, in Norway (?) 881
- Pyrethrins**  
against  
*Blattella germanica* 1143, 2541  
*Culex pipiens* 2604  
*C. quinquefasciatus* 1561  
Culicidae 3209  
*Musca domestica* 1143, 1378  
in pig housing 3350, 3351  
in piggeries 467  
*Ornithodoros tholozani*, on guinea-pig 1087  
*Panstrongylus megistus* 1507  
*Paratanytarsus*, in water supply 2713  
*Pediculus capitis*, on man 1498  
*Pthirus pubis*, on man 1176  
*Rhipicephalus appendiculatus* 699  
*R. sanguineus*, in dwellings 965  
formulations of 1009  
controlled release 1087  
in  $\beta$ -cyclodextrin 1437  
in *Bombyx mori*, toxicity of 1446  
in *Chrysanthemum cinerariaefolium* 1434  
in *Musca domestica*, inducing mixed function oxidase 909  
in *Periplaneta americana*, neurotoxicity of 3435  
insecticidal activity of 1009, 1435  
knockdown activity of 1444  
laboratory synthesis of 1436  
repellent for  
*Glossina morsitans*, on guinea-pig 1087  
*Panstrongylus megistus*, on rat 39  
synergists for, piperonyl butoxide as 1143, 1176, 1498  
with *Azadirachta indica* extracts, against, *Musca domestica* 1447  
with fenitrothion, and malathion, against, *Alphitobius diaperinus*, in fowl housing 687  
with garlic extracts, against, *Musca domestica* 1447  
with malathion, against, *Musca domestica* 2191  
with permethrin, against, *Alphitobius diaperinus*, in fowl housing 687  
with piperonyl butoxide, antagonistic 1507
- Pyrethroids**  
aziridine analogues of 2264  
development of 1378, 1435  
fluorinated 1439  
formulations of, in  $\beta$ -cyclodextrin 1437  
in foodstuffs, residues of 3128  
in *Periplaneta americana*  
neurotoxicity of 3435  
symptoms caused by 3435  
insecticidal activity of 1438  
role of secondary alcohol moieties in 1441  
insecticidal activity of stereoisomers of 1440  
laboratory synthesis of 1434, 1436, 1438  
metabolism of, review 1445  
neuropathic effects of 3128  
on cattle, duration of effectiveness of 2446  
specifications for 526  
vinyllogous relationship in 1443  
with acyclic carboxylic acids 2508  
with heterocyclic alcohols 2502  
with oxime linkage 1446  
without cyclopropane ring 1442  
without ester linkage 1444
- Pyrethrum** (see *Pyrethrins*)
- Pyricularia**, in, rice, in Crimea 87
- Pyridinium, 1-hexadecyl-**  
bromide  
against  
*Anopheles atroparvus* 75  
*Culex molestus* 75
- pyriformis, Gahrlepiea**  
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-phenyl- (see *Phenobarbital*)
- 2(1H)-Pyrimidinone, tetrahydro-5,5-dimethyl-, [3-[4-(trifluoromethyl)phenyl]-1-[2-[4-(trifluoromethyl)phenyl]ethenyl]-2-propenylidene]hydrazone, against, *Solenopsis invicta*** 759
- Pyroglyphidae**  
allergens of, role in house-dust allergens of 923  
distribution of 921  
in house dust  
in Denmark 287  
in different climates 3094  
in Japan 727
- Pyrrolidine, 1-(4-cyclohexyl-1-oxobutyl)-, repellent for, *Aedes aegypti*** 1813
- Pyrrolidine, 1-(3-cyclohexyl-1-oxopropyl)-, repellent for, *Aedes aegypti*** 1813
- Q fever** (see also *Coxiella burnetii*)
- qadrii, Neohaematopinus**
- Qalyub virus**  
in, *Ornithodoros erraticus*, in Egypt 1950  
properties of 1950  
taxonomy of 1950
- qinghaiensis, Amphipsylla**
- qinghaiensis, Haemaphysalis**
- qionghaiensis, Haematopota**
- quadrimaculatus, Anopheles**
- quadripertusus, Haematopinus**
- Quail (Coturnix coturnix)**  
pine resin in, not affecting development 1011  
spruce resin in, not affecting development 1011
- Quail, bobwhite** (see *Colinus virginianus*)
- Quaranfil virus**  
in  
*Argas hermanni*, in Afghanistan 695  
*A. vulgaris*, in Iran 2211, 2758
- quasiocellata, Nycteribia**
- Quebec**  
*Aedes mercurator* in 1818  
*Anopheles earlei* in, natural enemies of 1197  
*A. punctipennis* in, natural enemies of 1197  
*A. walkeri* in, natural enemies of 1197  
*Blattaria* in 551  
Chaoboridae in 672  
*Chrysops fuliginosus* in 2197  
Culicidae in 1219, 2881, 2958, 3290  
in caribou hoofprints 2063  
natural enemies of 2354  
Ixodoidea in, on small mammals 720  
*Tabanus nigrovittatus* in 2197
- Queensland**  
*Anopheles farauti* in 1552  
*Boophilus microplus* in  
on *Bos taurus*  $\times$  *B. indicus* 961  
on cattle 259, 260, 959, 1938, 3072  
*Calcaromyobia australasiae* in, on *Miniopterus* 301  
cattle in, tick control on 258, 259, 260  
Culicidae in, in coral cays 106  
*Culicoides* spp. in 2143  
*C. brevitarsis* in  
natural enemies of 2659  
viruses in 862, 866, 1253, 3303  
*C. molestus* in 3302  
*Demodex canis* in, on dog 2766  
*Knemidokoptes pilae* in, on budgerigar 1663  
*Lucilia cuprina* in 194  
*Psoroptes cuniculi* in, on horse 3091  
*Raillietia auris* in, on cattle 3102  
sheep in, fly control on 163  
*Stomoxys calcitrans* in, natural enemies of 1363  
veterinary entomology in 16, 2836
- queenslandicus, Siteroptes**
- querceti, Dendrophaonia**
- Quercus ilex, Ceratopogonidae** in holes in, in Spain 129
- Quinacrine** (see *Mepacrine*)
- Quinine** (see *Cinchonan-9-ol, 6'-methoxy-, (8 $\alpha$ ,9R)-*)
- quinquefasciatus, Culex**
- quinquestriatus, Buthus** (see *Leiurus quinquestriatus*)
- quinquestriatus, Leiurus (Buthus)**
- quinquevittatus, Eretmapodites**
- quinquevittatus, Tabanus**
- Quintiofos (O-ethyl O-8-quinoliny) phenylphosphonothioate**  
against, *Ornithodoros lahorensis* 3410  
in *Buphagus erythrorhynchus*, toxicity of 1643  
in dips, determination of 1010  
resistance to, in, *Boophilus microplus*, in South Africa 939
- quirini, Megabothris**
- quirosi, Odontopsyllus**
- R-69** (see *Oxazolidine, 3-acetyl-2-(2,6-dimethyl-5-heptenyl)-*)
- R-20458** (see *Oxirane, 3-[5-(4-ethylphenoxy)-3-methyl-3-pentenyl]-2,2-dimethyl-, (E)-*)
- Rabbit** (see also named species)
- Amblyomma hebraeum** on, effects of 2214
- Androctonus amoreuxi** venom in, pharmacokinetics of 306
- Anopheles annularis** on, feeding by 2059
- Bacillus sphaericus** in, not pathogenic 1785
- Centruroides noxius** venom in, antibodies to 2781
- Cheyletiella** spp. on, in Indonesia 2806
- C. parastivovrax** on  
alopecia caused by 2774  
in Japan 288
- Cimex** spp. on, antibodies to 562
- Culex** spp. on, antibodies to 562
- Dermacentor reticulatus** on, feeding by 1646
- D. variabilis** on  
feeding by 273  
host macromolecules in hemolymph of 3402
- Dermanyssus** spp. on, in Upper Volta 2687
- Dermatobia hominis** on  
antibodies to 1588  
immune responses to 3334  
immunization against 1589
- Dermatophagoides pteronyssinus** on, antibodies to 1956
- Echidnophaga myrmecobii** on, in New South Wales 46  
ectoparasites of, seasonal incidence of 2869
- Forcipomyia taiwana** on 418
- Glossina pallidipes** on, rearing of 2984
- G. palpalis** on 2686, 2687  
rearing of 1315
- Hyalomma anatolicum** on, development of 715
- H. impressum** on, immunity to 1939
- H. marginatum** on, development of 244
- Hybomitra erberi** on, in Ukraine 1024
- H. tsushimaensis** on, feeding by 3022
- Lucilia sericata** on, in Missouri 1346  
mite control on, acaricides for 728, 2248
- myxoma virus** in  
in Australia 2323  
in New South Wales 46  
in UK 2324
- Nocardia farcinica** in, tick transmission of 502
- Notoedres caniculi** on, in Indonesia 2806
- Ornithodoros moubata** on, immune response to 2220
- pest control on, acaricide applicators for 740
- Phlebotomus duboscqi** on, in Senegal 2147
- Psoroptes cuniculi** on  
in Indonesia 2806  
in Mexico 2774  
in Upper Volta 2687  
rearing of 2686, 2687
- Rhipicephalus appendiculatus** on  
feeding by 1115  
immunity to 1939
- Simulium** spp. on, feeding by 2981
- Siphonaptera** on  
in France 2335

- Rabbit contd.**  
*Siphonaptera* on *contd.*  
 in Portugal 2336  
*Spilopsyllus cuniculi* on  
 in Australia 2323  
 in UK 2324  
 Tabanidae on, in Connecticut 1921, 2443  
 tick control on, immunization for 3390  
*Trypanosoma congolense* in, tsetse  
 transmission of 1870
- Rabbit, cottontail** (see *Sylvilagus floridanus*)
- Rabon** (see *Tetrachlorvinphos*)
- Raccoon** (see *Procyon lotor*)
- Radfordia acinaciseta**  
 descriptions of 2483  
 in Malaysia 2483  
 on *Rattus rajah*, in Malaysia 2483
- Radfordia chirodomys**  
 in Malaysia 2483  
 on *Chirodomys gliroides*, in Malaysia  
 2483
- Radfordia ensifera**  
 in Malaysia 2483  
 on *Rattus rattus*, in Malaysia 2483  
 on *Rattus tiomanicus*, in Malaysia 2483
- Radfordia ensifera jalorensis**  
 ssp. nov., description of 2483  
 in Malaysia 2483  
 on *Rattus tiomanicus*, in Malaysia 2483
- Radfordia hornerae**  
 in Malaysia 2483  
 on *Rattus sabanus*, in Malaysia 2483
- Radfordia pahangensis**  
 sp. nov., description of 2483  
 in Malaysia 2483  
 on *Rattus fulvescens*, in Malaysia 2483  
 on *Rattus inas*, in Malaysia 2483
- Radfordia perakensis**  
 in Malaysia 2483  
 on *Rattus rajah*, in Malaysia 2483
- Radfordia selangorensis**  
 sp. nov., description of 2483  
 in Malaysia 2483  
 on *Rattus whiteheadi*, in Malaysia 2483
- Radfordia subangensis**  
 sp. nov., description of 2483  
 in Malaysia 2483  
 on *Rattus rajah*, in Malaysia 2483
- Radiation**, use in entomology of 2825
- Radiation, gamma**  
 against, *Pseudomonas aeruginosa* 1093  
 effects of, on  
*Aedes caspius* 2634, 2635, 2636  
*Argas arboreus* 1397  
*Calliphora vicina* 219  
*Culex tarsalis* 2101  
*Damalinia ovis* 30  
*Glossina* spp. 1100  
*G. palpalis* 873, 1323  
*Leptotrombidium deliense* 298  
*Lucilia cuprina* 888  
*Musca domestica* 218, 478, 903, 2720  
*Rhipicephalus appendiculatus* 3075  
*Stomoxys calcitrans* 1090, 3370  
*S. nigra* 444
- Radiation, infrared**, *Triatoma infestans*  
 responses to 1123
- Radiation, microwave**, effects of, on,  
*Ornithonyssus sylviae* 2765
- Radiation, ultraviolet**  
 effects of, on, *Bacillus thuringiensis*  
 1249, 1250  
*Triatoma infestans* responses to 1123
- Radioallergosorbent test** (see  
 Radioimmunoassay)
- Radioimmunoassay**  
 for diagnosing hypersensitivity to *Apis*  
*mellifera* venom 1933  
 for diagnosing hypersensitivity to  
*Cladotanytarsus lewisi* 1596  
 for diagnosing hypersensitivity to house-  
 dust mites 989, 990, 992, 1419, 1654,  
 3420  
 for diagnosing hypersensitivity to  
 Hymenoptera stings 1389, 3383
- Raillietia**, key 3102
- Raillietia auris**  
 descriptions of 3102  
 in Australia 3102  
 in Mexico 1128  
 on cattle  
 in Mexico 1128  
 in Queensland 3102
- Raillietia australis**  
 descriptions of 3102  
 in Australia 3102  
 on *Vombatus ursinus*, in Australia 3102
- Raillietia manfredi**  
 sp. nov., description of 3102  
 in Australia 3102, 3105  
 on goat, in New South Wales 3102, 3105
- Raillietina cestitillus**, in, Carabidae 489
- Railway embankments**  
*Euproctis chrysorrhoea* in, in England  
 3377  
 pest control in, ULV sprayers for 3377
- Rainfall**  
 effects of, on  
*Anopheles gambiae* 1836  
*A. merus* 1836  
 dengue hemorrhagic fever 2130  
*Musca vetustissima* 1353
- Raisins and sultanias**, bait component for,  
*Blattella germanica* 2541
- Rangifer caribou**, Culicidae in hoofprints of,  
 in Quebec 2063
- Rangifer tarandus** (see Reindeer)
- Ranunculus fluitans**, *Simulium* spp.  
 associated with, in France 426
- raptor, Muscidifurax**  
*rara*, *Haematopota*  
*raridens*, *Macrobrachium*  
 Rash (see *Exanthema*)  
*raskemensis*, *Dermacentor*  
 RAST (see Radioimmunoassay)
- Rat** (see also named species)  
 apamin in, effects on central nervous  
 system of 2458  
*Apis mellifera* venom in, cardiovascular  
 effects of 1929  
 arthropod parasites of, in Poland 50  
*Bacillus sphaericus* in, not pathogenic  
 1785  
 bioresmethrin in, toxicity of 1452  
*Centruroides sculpturatus* venom in,  
 carboxypeptidase inhibition by 2499  
 cismethrin in, toxicity of 1452  
*Dermacentor variabilis* on  
 host macromolecules in hemolymph of  
 3402  
 resistance to 1407  
*Forcipomyia taiwana* on 418  
*Hymenolepis diminuta* in, infectivity of  
 1390  
 insecticides in, acetylcholinesterase  
 inhibition by 748  
*Latrodectus antheratus* venom in,  
 levarterenol release caused by 3115  
*Leiurus quinquestriatus* telson extract in,  
 effects on gut of 2497  
 malathion in, toxicity of, effects of drugs  
 on 750  
*Mesobuthus eupeus* venom in, effects on  
 blood circulation of 307  
 organophosphates in, toxicity of 1681  
 phenothiazine in, toxicity of 1012  
*Polyplax spinulosa* on, effects of riboflavin  
 on susceptibility to 1179  
 pyrethroids in, toxicity of 1144, 1985  
*Schoengastia vieta* on, in Malaysia 513  
*Tityus serrulatus* venom in  
 acetylcholine release from brain caused  
 by 1677  
 stimulating salivary glands 2780  
*Xenopsylla cheopis* on, fecundity of 1061
- Rat, Norway** (see *Rattus norvegicus*)
- Ratemia asiatica**  
 sp. nov., description of 2855  
 in China 2855  
 on horse, in Xinjiang-Uighur 2855
- Rattimyobia**, taxonomy of 2483
- Rattus**  
*Leptotrombidium umbricola* on, in West  
 Malaysia 1974  
*Rickettsia mooseri* in 2321  
*Rattus andersoni*, *Hystriochopsylla*  
*rotundisnuata* on, in Yunnan 2580
- Rattus argentiventer**  
*Leptotrombidium arenicola* on, in  
 Indonesia 2810  
*L. deliense* on, in Indonesia 1963
- Rattus bagobus**  
*Walchiella impar* on, in Philippines 3428  
*W. oudemansi* on, in Philippines 3428
- Rattus bowersii**  
*Leptotrombidium nanlingense* on, in  
 Guangdong 2247  
*L. trapezoidum* on, in China 2245
- Rattus coxingi**  
*Genoneopsylla bisinuata* on, in China  
 2864  
*Muritrombicula dali* on, in China 2246
- Rattus exulans**  
 Hoplopleuridae on, in Burma 1496  
*Leptotrombidium deliense* on, in Irian  
 Jaya 1961  
*L. fletcheri* on, in Irian Jaya 1961  
 Mesostigmata on, in Burma 1962  
*Rickettsia tsutsugamushi* in, in Irian Jaya  
 1961  
*Siphonaptera* on, in Java 817  
 Trombiculidae on, in Burma 2479
- Rattus flavipectus**  
*Ascoschoengastia yunnanensis* on, in  
 Yunnan 293  
*Walchia jiangxiensis* on, in China 3100
- Rattus fulvescens**  
*Herpetacarus spinosetosus* on, in Fujian  
 2231  
*Radfordia pahangensis* on, in Malaysia  
 2483  
*Walchia jiangxiensis* on, in China 3100
- Rattus inas**, *Radfordia pahangensis* on, in  
 Malaysia 2483
- Rattus insignis**, *Leptotrombidium*  
*subobscurum* on, in Philippines 2490
- Rattus leucopus**, *Leptotrombidium fletcheri*  
 on, in Irian Jaya 1961
- Rattus losea**, *Leptotrombidium dongluoensis*  
 on, in China 2245
- Rattus niobe**  
*Guntheria buelowi* on, in Papua New  
 Guinea 3426  
*G. sabinae* on, in Papua New Guinea  
 3426  
*G. serrata* on, in Papua New Guinea  
 1005  
*G. wauensis* on, in Papua New Guinea  
 1968  
*Odontacarus mitchelli* on, in Papua New  
 Guinea 3426
- Rattus nitidus**, *Herpetacarus spinosetosus*  
 on, in Fujian 2231
- Rattus niviventer**  
*Genoneopsylla bisinuata* on, in China  
 2864  
*Herpetacarus spinosetosus* on, in Fujian  
 2231  
*Leptotrombidium discum* on, in China  
 2245  
*L. nudisensillum* on, in China 2246  
*L. postfoliatum* on, in China 2245  
*Siphonaptera* on  
 in Java 817  
 in Yunnan 568
- Rattus norvegicus**  
*Chaetopsylla wenxianensis* on, in China  
 361  
 Hoplopleuridae on, in Burma 1496  
*Leptotrombidium bengbuensis* on, in  
 China 3098  
 Mesostigmata on, in Burma 1962  
*Siphonaptera* on, in Wisconsin 2304  
 Trombiculidae on, in Burma 2479  
*Trypanosoma cruzi* in, in Mexico 352  
*Walchia jiangxiensis* on, in China 3100
- Rattus rajah**, *Radfordia* spp. on, in Malaysia  
 2483
- Rattus rattus**  
*Gahrlepiea meridionalis* on, in Yunnan  
 1667  
*Herpetacarus tengchongensis* on, in  
 Yunnan 1667  
 Hoplopleuridae on, in Burma 1496  
*Leptotrombidium arenicola* on, in  
 Indonesia 2810  
*L. deliense* on, in Irian Jaya 1961  
*L. fletcheri* on, in Irian Jaya 1961  
*Listrophoroides decoratus* on, in Pakistan  
 2772  
 Mesostigmata on, in Burma 1962  
*Nosopsyllus fasciatus* on, in Argentina  
 321  
*Radfordia ensifera* on, in Malaysia 2483  
*Rhodnius pallescens* on, in Panama 2576  
*Rickettsia tsutsugamushi* in, in Irian Jaya  
 1961



- Rattus rattus** *contd.*  
*Schoengastia* spp. on, in Thailand 513  
 Siphonaptera on  
   in Java 817, 2819  
   in Tanzania 2030  
*Stivalius cognatus* on, in Java 3188  
 Trombiculidae on, in Burma 2479  
*Xenopsylla cheopis* on  
   in Java 3188  
   in Morocco 3183
- Rattus ruber**  
*Guntheria pectinata* on, in Papua New Guinea 3426  
*Leptotrombidium deliense* on, in Irian Jaya 1961
- Rattus sabanus**, *Radfordia hornerae* on, in Malaysia 2483
- Rattus tiomanicus**  
 mite control on, systemic acaricides for 1412  
*Radfordia ensifera* on, in Malaysia 2483  
 Siphonaptera on, in Java 817  
 Trombiculidae on, in West Malaysia 725, 1412
- Rattus whiteheadi**, *Radfordia selangorensis* on, in Malaysia 2483
- Rearing techniques**  
*Aedes aegypti* 2608  
*Amblyomma americanum* 2467  
*Anopheles albimanus* 80, 1815, 2125, 3232, 3236  
*A. annularis* 2059  
*A. pseudopunctipennis* 843, 3237  
*A. subpictus* 2621  
*Bacillus alvei* 2641  
*B. brevis* 2641  
*Beauveria tenella* 2641  
*Cnephia dacotensis* 431  
*Cochliomyia hominivorax* 1463, 1918  
*Comperia merceti* 1737  
*Culex tritaeniorhynchus* 3255  
*Culicoides variipennis* 628, 3301  
*Forcipomyia taiwana* 418  
*Glossina* spp. 148, 2406  
*G. austeni* 871  
*G. morsitans* 871, 1093, 1099, 1320  
*G. pallidipes* 1102, 1316, 2984, 3000  
*G. palpalis* 645, 1088, 1104, 1105, 1314, 1315, 1320, 2686, 2687, 2985  
*Hybomitra lasiophthalma* 2431  
*Leptopsylla segnis* 2333  
*Lucilia cuprina* 1897  
*Metarhizium anisopliae* 2641  
*Metriocnemus hygroptericus* 2719  
*Musca autumnalis* 454  
*Onchocerca gutturosa* 2381  
*Ornithocoris toledoi* 1747  
*Phlebotomus argentipes* 2968  
*P. ariasi* 633  
*P. papatasi* 2968  
*P. perniciosus* 633  
*Psychoda alternata* 2719  
*P. severini* 2719  
*Romanomermis culicivorax* 3206  
*R. nielsenii* 1817  
*Simulium* spp. 431, 2981  
*S. decorum* 2395  
*Solenopsis invicta* 482, 2725  
*S. richteri* 2725  
*Stomoxys nigra* 444  
*Trypanosoma* 1470  
*T. brucei* 149, 875  
*T. congolense* 2162, 2381  
 arthropod allergies and 2828
- reclinata**, *Polyplax*  
*reclusa*, *Loxosceles*  
*recondita*, *Uranotaenia*  
*reconditus*, *Culicoides*  
*rectangulatus*, *Ceratophyllus* (see *Megabothris rectangulatus*)  
*rectangulatus*, *Megabothris* (*Ceratophyllus*)  
*redikorzevi*, *Ixodes*  
*Reductase*, guanilate, in *Anopheles albimanus* 1213  
*Reductase*, pyrroline-5-carboxylate, in *Aldrichina grahami* larvae, localisation of 685
- Redunca arundinum**, *Ixodes donarthuri* on, in Mozambique 1404
- Reduviidae**  
 in dwellings, in Brazil 2299  
 pathogens of, bibliography 2517  
 tibial pads in 3168
- Reduvius personatus**  
 biology of 803  
 on man, in central Europe 803
- Redwing** (see *Turdus iliacus*)
- Reedbuck** (see *Redunca arundinum*)
- reflexus**, *Argas*  
*regina*, *Phormia*
- Regular mosquito iridescent virus**, in, *Aedes taeniorhynchus*, site of entry of 1819
- regularis**, *Tabanus*
- reidi**, *Haemogamasus*
- Reindeer**  
*Cephenemyia trompe* on, in Finland 3008  
*Oedemagena tarandi* on, in Finland 3007, 3008  
 Oestroidea on, book 2691  
 pest control on, insecticides for 3008
- reinigiana**, *Hybomitra montana*  
*reinwardtii*, *Tabanus*
- Reithrodontomys megalotis**, *Ixodes pacificus* on, paralysis caused by 1650
- Relapsing fever**, tick transmission of 3137
- Reldan** (see Chlorpyrifos-methyl)
- relictus**, *Chrysops*
- Reoviridae**  
 in  
   *Aedes cantator*, in Connecticut 2893  
   *Culex pipiens*, in Ukraine 1025  
   invertebrates, review 525  
   *Musca domestica*, RNA in 1925  
   Simuliidae, in Guatemala 144
- Repellents**  
 bioassay of, review 1455  
 for Culicidae 3284  
 for Simuliidae, evaluating of 1856  
 insect control using 1983  
 substances tested as:  
   aquatic-plant extracts 2355  
   citral 3124  
   cyclic analogues of lactic acid 1525  
   cyclohexanealkanoic carboxamides 1813  
   *Lemna minor* extracts 2618
- Reports (1978-79)**, Waite Agricultural Research Institute, South Australia 3037
- reptans**, *Simulium*
- Reptilia**  
 Diptera on, in Ukraine 1024  
 Ixodoidea on, in Morocco 3403  
*Ornithodoros* spp. on, in Georgia (USSR) 3408  
 Phlebotominae on, in Panama 2150  
*Phlebotomus dubosqi* on, in Senegal 2147
- Reservoirs** (see Lakes, reservoir)
- Reslin** (see Allethrin, [1R-[1 $\alpha$ (S'),3 $\beta$ ]]-, with bioresmethrin)
- Resmethrin** ([5-(phenylmethyl)-3-furanyl]methyl 2,2-dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylate) against  
*Culex pipiens* 2604  
 Culicidae 2111, 3209  
*Musca domestica*, in poultry housing 1601  
 Phlebotominae 2536  
 (1R-cis)- (see Cismethrin)  
 (1R-trans)- (see Bioresmethrin)
- Respiratory hypersensitivity**  
 to *Dermatophagoides*, in man 923, 2489  
 to *Dermatophagoides farinae*  
   in man 723, 989, 990, 991, 1426, 3110  
   seasonal variation in 2227  
 to *Dermatophagoides pteronyssinus*  
   in man 520, 724, 739, 769, 989, 990, 992, 1419, 1426, 1654, 1958, 1975, 2492, 3109, 3110, 3111, 3112  
   treatment of 2763  
 to *Euroglyphus maynei*, in man 923  
 to house dust, in man 1955  
 to *Sitophilus granarius*, in man 991
- Restaurants**  
*Periplaneta americana* in, in Philippines 1727  
 pest control in 1145
- Restlessness** (see Psychomotor agitation)
- restuans**, *Culex*
- reticulatus**, *Dermacentor*
- Reticulitermes lucifugus santonensis** (see *R. santonensis*)
- Reticulitermes santonensis**, antennae in, sensilla on 548
- Retinal pigments**  
 in insect eyes, isolating of 2448  
 in *Lucilia cuprina*, effects of eye colour mutations on 2195
- Réunion**  
*Amblyomma variegatum* in 958  
 heartwater in 958
- Reviews**  
 arboviruses associated with sea birds 1947  
 arthropod compound eyes 778  
*Babesia* in man 940  
*Bacillus thuringiensis* production and utilisation 1535  
*B. thuringiensis* protein crystal structure and functions 1536  
 bioassay of pesticides 1455  
 biological control of *Glossina* 437  
 Blattaria in East Germany 335  
 Chagas' disease 3138  
 delayed neurotoxicity of organophosphates 3135  
 dengue hemorrhagic fever 390  
 environmental impact of *Glossina* control 1334  
 feedstuffs from animal wastes 2710  
 hosts as affected by parasites 1724  
 human arbovirus diseases in Central and West Africa 1826  
 human arbovirus diseases in tropics 1945  
 immunity to ticks in cattle 952  
 insect diapause 1191  
 insect growth regulators for pest control 2838  
 insect juvenile hormone regulation 3134  
 insect pheromones 1716  
 insect photoperiodism 2278  
 insect tracheoles 2835  
 insecticide resistance and its management 1683  
 invertebrate salivary-gland physiology 2477  
 juvenile hormones and their effects on insects 3150  
 light polarisation analysis in insects 2830  
 malaria 3194  
 metabolism of pyrethroids 1445  
 microbial agents as insecticides 1680  
 mosquito cell lines 1468  
 nematodes for biological control of insects 2610  
 non-target effects of pesticides 1987  
 pathogens of Culicidae 1783  
 pesticide application equipment and techniques 2271  
 pesticide usage, prodigal or precise 760  
 precipitin tests in predator-prey studies 1482  
 Protozoa for insect control 1539  
 Protozoa in insects 3136  
 relations between mammals and arthropod parasites 327  
 role of carbon dioxide in mosquito host-seeking 1792  
 sex ratio in ectoparasitic insects 2281  
 spread of insect-transmitted virus diseases of animals 328  
 taxonomic characters for Culicidae 210  
 tick-borne diseases in modern society 3137  
 tick-borne encephalitis in Europe 1946  
 tick cell cultures 1469  
 tick salivary gland functions 953  
*Toxorhynchites* biology 3139  
 trehalose in insects 330  
 triphenyltin pesticides 3125  
 viral hemorrhagic fevers in Africa 2956  
 viruses of invertebrates 525
- Rhabditidae**, in insects, book 1134
- Rhabdopedilon longicornis**  
 in New Zealand 1172  
 on *Cervus elaphus*, in New Zealand 1172
- Rhabdoviridae**, in, invertebrates, review 525
- Rhadinopsylla integella**  
 in USSR 3184  
 on small mammals, in Siberia 3184
- Rhadinopsylla integella casta** (see *R. integella*)

- Rhadinopsylla integella integella**, in Hungary 2027
- Rhadinopsylla li ventricosa** in USSR 1688
- Yersinia pestis* in, in Kirgizia 1688
- Rhadinopsylla rothschildi** in USSR 1026
- on *Microtus brandti*, in Transbaikalia 1026
- Rhagionidae** in Nearctic region, book 2587
- pupae of 1348
- rheinwaldi**, *Leptotrombidium*
- rheophilum**, *Simulium* (see *S. argyreatum*)
- Rhinitis**, allergic, perennial in man
- caused by *Dermatophagoides pteronyssinus* 724, 2763
- caused by *Sarcophaga carnaria* 769
- role of house-dust mites in 1958
- role of insects in 2132
- Rhinoceros dung**, *Onitis assamensis* in, in Assam 2724
- Rhinoestrus**, in Tadzhikistan 154
- Rhinoestrus purpureus** biology of 442
- in USSR 442, 654
- on horse, in Buryatia 442
- on man, in USSR 654
- rhinolophia**, *Calcarmyobia*
- rhinolophinus**, *Paraperiglischrus*
- Rhinolophus affinis** *Whartonia dewitti* on in Malaysia 730
- in Thailand 730
- Rhinolophus cornutus**, *Paraperiglischrus*
- rhinolophinus** on, in Japan 505
- Rhinolophus ferrumequinum** *Acari* on, in Uzbekistan 1071
- Paraperiglischrus rhinolophinus* on, in Japan 505
- P. sternalis* on, in Japan 505
- Rhinolophus lobatus**, *Calcarmyobia*
- rhinolophia** on, in Kenya 301
- Rhinophylla pumilio**, *Psorergatoides*
- guyanensis** on 736
- Rhinosciurus laticaudatus**, *Cheyletus*
- pluridens** on, in West Malaysia 2771
- Rhipicephalus**
- Bhanja virus* in, in Kenya 1641
- Congo virus in, transmission of 1945
- control of 1480
- Coxiella burneti* in, in India 2748
- Dugbe virus in, in Kenya 1641
- in Indonesia 925
- in Italy 3064
- in Karnataka 2470
- Nairobi sheep disease, virus in, in Kenya 1641
- on cattle, in Kenya 1641
- on livestock, in Mongolia 1480
- on sheep, in Kenya 1641
- preyed on by, *Buphagus erythrorhynchus*, in South Africa 1643
- Theileria parva* in, transmission of 936
- Rhipicephalus appendiculatus** acaricide resistance in 699
- cell cultures from 1469
- cold receptor in 3076
- control of
- acaricides for 699, 757, 2737
- grasses for 1722
- dimethyl sulfoxide in, toxicity of 2225
- feeding behaviour in 1722
- effects of host nutrition on 1115
- host stocking density as affecting 1722
- in Kenya 3089
- in South Africa 757, 1645, 2468
- in Zimbabwe 937
- nymphal development in, effects of  $\gamma$ -irradiation on 3075
- on cattle
- immunity to 1939
- in Kenya 3089
- in South Africa 1645
- in Zimbabwe 937
- on rabbit, immunity to 1939
- preyed on by
- Buphagus erythrorhynchus* 1643
- in South Africa 2468
- Theileria* spp. in
- development of, effects of ecdysis on 276
- Rhipicephalus appendiculatus** contd.
- Theileria* spp. in contd.
- transmission of 942
- T. parva* in
- artificial infection with 2225
- culturing of 1940
- detecting of 3089
- infectivity of, effects of  $\gamma$ -irradiation on 3075
- monitoring of 2215
- transmission of 698, 1722
- T. taurotragi* in, development of 709
- Rhipicephalus bursa** *Babesia ovis* in, enzymes in 264, 3077
- in Iran 2750
- in Spain 3078
- in USSR 1636
- in Yugoslavia 701
- Listeria monocytogenes* in
- multiplication of 262
- persistence of 262
- on cattle, in Spain 3078
- on domestic animals, in Turkmenia 1636
- on goat, in Iran 2750
- on *Ovis orientalis*, in Iran 2750
- Rhipicephalus evertsi** control of, acaricides for 757
- in South Africa 757
- in Zimbabwe 1638
- seasonal abundance of 1638
- Wad Medani virus in, in West Africa 704
- Rhipicephalus evertsi evertsi** *Anaplasma marginale* in, transmission of 950
- in South Africa 1645
- on cattle, in South Africa 1645
- on sheep, paralysis caused by 3395
- toxic phase of 3395
- Rhipicephalus guilhoni** in Egypt 2756
- on goat, in Egypt 2756
- Wad Medani virus in, in West Africa 704
- Rhipicephalus pulchellus** in Somalia 251
- Kisemayo virus in, in Somalia 251
- on camel, in Somalia 251
- Rhipicephalus pumilio** *Coxiella burneti* in, in Kirgizia 1688
- in USSR 1688
- Rhipicephalus rossicus**, *Salmonella*
- typhimurium** in, persistence of 3084
- Rhipicephalus sanguineus** ammonia in, receptors for 976
- Babesia bigemina* in, transmission of 1943
- biology of 965
- control of, acaricides for 965, 1459
- Coxiella burneti* in, in Karnataka 2470
- descriptions of 965
- growth regulators in, effects on embryonic development of 2754
- habitats of 3062
- humidity preferences in 2473
- in Argentina 984
- in Australia 533
- in Denmark 3400
- in French Polynesia 1943
- in German Federal Republic 965
- in India 2470, 2748
- in Italy 3062, 3063
- in Jamaica 2463
- in Spain 2869
- in USA 1398, 2465
- in Yugoslavia 701
- in dwellings
- in Argentina 984
- in German Federal Republic 965
- insect juvenile hormones in, accentuating effects of precocenes 1393
- on cattle, in French Polynesia 1943
- on dog
- imported into New Zealand 1409
- in Denmark 3400
- in French Polynesia 1943
- in German Federal Republic 965
- in Italy 3063
- in Jamaica 2463
- in Karnataka 2470
- in Tasmania 533
- on domestic animals, in Connecticut 1398
- Rhipicephalus sanguineus** contd.
- on man, in Connecticut 1398
- on *Oryctolagus cuniculus*, in Spain 2869
- on wildlife, in Oklahoma 2465
- oviposition in
- effects of nutrition on 2753
- effects of temperature on 2753
- precocenes in, effects of 1393
- Rickettsiaceae in, in India 2748
- seasonal abundance of 3063
- sex pheromone of, responses to 926
- temperature preferences in 2473
- water relations of 3414
- group of, on livestock, in Egypt 2752
- Rhipicephalus sanguineus sanguineus** in Egypt 3394
- on donkey, in Egypt 3394
- on sheep, in Egypt 3394
- Rhipicephalus simus** *Anaplasma marginale* in
- in males 3082
- transmission of 950
- Rhipicephalus turanicus** *Coxiella burneti* in, in Kirgizia 1688
- habitats of 1072
- in Egypt 2756
- in Iran 2750
- in USSR 1072, 1636, 1688
- on goat, in Egypt 2756
- on *Ovis orientalis*, in Iran 2750
- Rickettsia sibirica* in, in Kirgizia 1688
- Rhizopoda** 3136
- Rhizopus**, in, Culicidae, in Ukraine 1025
- Rhizopus stolonifer**, in, *Phlebotomus* spp., pathogenicity of 2968
- Rhodacarellus**, in USSR 1006
- Rhodacaridae**, in USSR, book 1006
- Rhode Island**
- Aedes sollicitans* in, in salt marshes 3228
- Aplodontopus sciuricola* in, on *Tamias* 922
- Rhodnius** diuretic hormones in, bioassay of 3144
- ovulation hormone in, released by
- ecdysterone 3175
- reproduction in 1725
- tracheoles in 2835
- Rhodnius domesticus**, eggs of 2575
- Rhodnius ecuadoriensis**, eggs of 2575
- Rhodnius nasutus**, eggs of 2575
- Rhodnius neglectus** chromosomes in 1500, 1501
- eggs of 2575
- feeding behaviour in 805
- in Brazil 806, 811
- in Venezuela 1500
- Trypanosoma cruzi* in, infectivity of, strain differences in 806
- Rhodnius neivai** chromosomes in 1500, 1501
- eggs of 2575
- in Venezuela 1500
- Rhodnius pallescens** descriptions of 2019
- eggs of 2575
- host preferences in 2576
- in Panama 2576
- on *Didelphis marsupialis*, in Panama 2576
- on man, in Panama 2576
- Rhodnius paraensis**, eggs of 2575
- Rhodnius pictipes** chromosomes in 1500
- eggs of 2575
- in Venezuela 1500
- Rhodnius prolixus** accessory glands in
- development of 2024
- regulation of protein accumulation in 3170
- activity in, rhythm of 315
- amino acids in, retention during diuresis of 809
- antennae in, sensilla on 1505
- antigonadotropins in, source of 2858
- blood-feeding of, membranes for 3249
- Brindley's glands in, development of, effects of insect growth regulators on 2860
- cement gland in 814
- cholesterol-synthesis inhibitors in, metamorphosis inhibition by 804
- chromosomes in 1500



- Rhodnius prolixus** *contd.*  
 control of, insecticides for 561, 2018, 2573, 2777  
 digestive enzymes in 810  
 ecdysis in 2856  
 eggs of 2575  
 enzymes in 354, 1509  
 habitats of 37  
 in Panama 2020  
 in Venezuela 37, 561, 1500  
 in dwellings, in Venezuela 561  
 in palm trees  
   in Panama 2020  
   in Venezuela 37  
 insect growth regulators in, effects on  
   follicle extracellular spaces of 1499  
 life-cycle of 37  
 lindane in, knockdown caused by 2777  
 lipids in, visualising of 2861  
 neurosecretory system in 2856, 2858, 2859  
   effects of pyrethroids on 1182  
 nurse cell-oocyte interactions in 2862  
 olfactory system in, evolution of 3132  
 ovarian development in 2023  
 population dynamics of 40  
 reproduction in, effects of food  
   deprivation on 353  
 ribonucleic acids in 2857  
 saliva of 1509  
   inhibition of blood platelet aggregation  
   by 3171  
 salivation in 354  
 spermathecae in 1183  
*Trypanosoma cruzi* in  
   in Panama 2020  
   in Venezuela 37  
   lectins to 2295  
*T. hedricki* in, not developing 2863  
*T. rangeli* in  
   detecting of 813  
   in Panama 2020  
   in Venezuela 37  
   penetration of salivary glands by 1181
- Rhodnius robustus**  
 chromosomes in 1500, 1501  
 eggs of 2575  
 in Venezuela 1500  
 life history of 2019
- Rhododendron**, Chironomidae on, in  
 Pennsylvania 3359
- rhombifolia**, *Neostylopyga* (*Stylopyga*)
- rhombifolia**, *Stylopyga* (see *Neostylopyga*  
*rhombifolia*)
- Rhombomys opimus**  
*Coptosylla* spp. in burrows of,  
 distribution pattern of 1518  
 flea control in burrows of, inert dusts for  
 2578  
*Leishmania major* in, infectivity for  
*Phlebotomus papatasi* of 2146  
*Polyplax opimi* on, in Tadzhikistan 341  
 Siphonaptera in nests of, in Mongolia  
 2870  
 Siphonaptera on, assessing infestations of  
 571  
*Xenopsylla* spp. in burrows of,  
 distribution pattern of 1518  
*X.* spp. on, in Kazakhstan 1516
- Rhopalopsyllus lugubris lugubris**  
 in Brazil 1751  
 on *Proechimys*, in Brazil 1751
- Rhynchelmis**, in aquatic habitats, effects of  
 pirimiphos-methyl on 2942
- Rhynchophthirina**, on vertebrates, in  
 Afrotropical region, book 1177
- Rhyzopertha dominica**, bacteria in 1633
- Riboflavin**, in rat, effects on susceptibility to  
*Polyplax spinulosa* of 1179
- Ribonucleic acids**  
 in *Aedes aegypti* accessory glands,  
 synthesis of 2602  
 in *Calliphora vicina*  
 effects of methoprene on synthesis of  
 3354  
 effects of moulting hormones on  
 synthesis of 3354  
 in *Haematobia irritans* ovaries 898  
 in *Musca domestica* eggs, effects of  $\gamma$ -  
 irradiation on 478  
 in *Periplaneta americana*, effects of  
 thermal acclimation on 1490
- Ribonucleic acids**, ribosomal, in *Rhodnius*  
*prolixus*, thermal stability of 2857
- Ribonucleic acids**, viral, in *Musca domestica*  
 virus 1925
- Rice** (*Oryza sativa*)  
 insecticides in, residues of 1709
- Rice (cooked grain)**, naled in, uptake from  
 air of 2266
- Rice-field levees**, *Psorophora columbiae* in,  
 egg horizons of 375
- Rice-fields**  
*Aedes vexans* in, in Hokkaido 603  
*Anopheles* spp. in  
   in India 2372  
   in Kenya 854  
*A. atroparvus* in, in Crimea 87  
*A. freeborni* in, in California 2093  
*A. messeae* in, in Caucasus 56  
*A. quadrimaculatus* in, in Arkansas 1193  
*A. sinensis* in, in Hokkaido 603  
*A. subpictus* in, in Indonesia 1777  
 Chironomidae in, effects of fertilizers on  
 1624  
*Cricotopus sylvestris* in, in Caucasus 56  
*Culex orientalis* in, in Hokkaido 603  
*C. tarsalis* in  
   effects of crop rotation on 2115  
   effects of irrigation water source on  
   2115  
   in California 2093  
*C. tritaeniorhynchus* in  
   effects of agricultural pesticides on  
   1226  
   mortality of 99  
 Culicidae in  
   in Andhra Pradesh 3275  
   in Azerbaijan 852  
   in Hokkaido 3271  
*Cyprinodon macularius* in, effects on  
 ecosystem of 1543  
*Gambusia affinis* in  
   effects on ecosystem of 1543  
   trapping of 2096  
 irrigation of, role in fly control of 532  
 mosquito control in 3203  
   biological 1728, 1827  
   insecticide drips for 1709  
   lecithin monolayers for 854  
 predatory arthropods in, effects of  
 agricultural pesticides on 1226  
*Psorophora columbiae* in  
   in Arkansas 376, 1193  
   mapping of 3278  
*Tabanus* spp. in, in Japan 1373
- Rice stores**, *Periplaneta americana* in, in  
 Taiwan 3161
- richteri**, *Solenopsis*
- Ricifon** (see *Trichlorphon*)
- Ricinus**  
 on *Cricetus cricetus*, in Hungary 2012  
 on Passeriformes, in New Zealand 801
- Ricinus communis** (see *Castor*)
- ricinus**, *Ixodes*
- Rickettsia akari**, in, *Ornithodoros*  
*lahorensis*, development of 3070
- Rickettsia burneti** (see *Coxiella burneti*)
- Rickettsia conori**  
 in  
   *Ctenocephalides canis*, in Karnataka  
   2343  
   *Ornithodoros lahorensis*, development  
   of 3070  
   *Rhipicephalus sanguineus*, transmission  
   of 965
- Rickettsia montana**  
 in  
   *Dermacentor andersoni*, in Montana  
   3065  
   *D. variabilis*  
   in Massachusetts 967  
   in Ohio 234  
   dog, in Massachusetts 967
- Rickettsia mooseri**  
 in  
   Siphonaptera, pathogenicity of 1043  
   small mammals, in Maharashtra 3090  
   *Xenopsylla cheopis*, electron microscopy  
   of 2320  
   reservoirs of 2321  
   transmission of 2321  
   vectors of 2479
- Rickettsia prowazekii**  
 in  
   *Androlaelaps fahrenheitzi*, not  
   transmitted 3066  
   *Ctenocephalides felis*, not transmitted  
   3066  
   *Dermacentor variabilis*, not transmitted  
   3066  
   *Glaucomys volans*, in Massachusetts  
   3182  
   *Haemogamasus reidi*, not transmitted  
   3066  
   man, in Massachusetts 3182  
   *Neohaemaphysalis sciuropteri*,  
   transmission of 3066  
   *Orchopeas caedens*, transmission of  
   3182  
   *O. howardii*, not transmitted 3066  
   *Pediculus* spp., transmission of 34  
   *P. humanus*, replication of 3066  
   *Xenopsylla cheopis*, not transmitted  
   3066
- Rickettsia rhipicephali**, in, *Dermacentor*  
*andersoni*, in Montana 3065
- Rickettsia rickettsi**  
 in  
   *Dermacentor andersoni*  
   in Montana 3065  
   transmission of 966  
   *D. variabilis*  
   in Massachusetts 967  
   in Ohio 234  
   transmission of 966  
   *Rhipicephalus sanguineus*, transmission  
   of 965  
   *Sylvilagus floridanus*, infectivity of 966  
   *S. nuttallii*, infectivity of 966
- Rickettsia sibirica**  
 in  
   *Dermacentor reticulatus*, in Lithuania  
   3399  
   *Hyalomma marginatum*, in Kirgizia  
   1688  
   Ixodidae, transmission of 2747  
   *Ornithodoros lahorensis*, development  
   of 3070  
   *Rhipicephalus turanicus*, in Kirgizia  
   1688
- Rickettsia slovaca**  
 in  
   *Dermacentor marginatus*, ultrastructure  
   of 271  
   *Ixodes ricinus*, in Lithuania 3399  
   man, in Czechoslovakia 1647
- Rickettsia tsutsugamushi**  
 in  
   *Leptotrombidium arenicola*  
   in Indonesia 2810  
   transmission of 2812  
   *L. deliense*, transmission of 297, 2812  
   *L. fletcheri*, transmission of 2812  
   man, in West Malaysia 2812  
   *Rattus exulans*, in Irian Jaya 1961  
   *R. rattus*, in Irian Jaya 1961  
   small mammals, in Maharashtra 3090  
   Trombiculidae, in Maharashtra 3090  
   vectors of 2801  
   habitats of 2811
- Rickettsiaceae**  
 in  
   *Hyalomma anatolicum*, in India 2748  
   insects, defence mechanisms against  
   544  
   *Rhipicephalus sanguineus*, in India  
   2748  
   *Xenopsylla cheopis*, symbiotic 2320  
   insect control using, review 1680
- Rickettsial infections**, tick transmission of  
 924
- RiD** (see *Pyrethrins*)
- riethi**, *Culicoides*
- Rift Valley fever**  
 in Africa, review 2956  
 virus  
   in  
   *Aedes lineatopennis*, in Kenya 1551  
   *Anopheles coustani*, in Kenya 1551  
   *Culex pipiens*  
   in Egypt 2135  
   transmission of 2135  
   *C. theileri*, in South Africa 2139  
   *Culicoides* spp., in Kenya 1551

- Rift Valley fever** *contd.*  
 virus *contd.*  
   in *contd.*  
     *Ornithodoros savignyi*, not infective 2139  
     vectors of 2006, 2139
- riouxi, Hystrichopsylla talpae**
- Riparia riparia**  
*Ceratophyllus* spp. in nests of, in Alaska 2303  
*Ixodes lividus* in nests of, in Siberia 3083
- riparius, Ceratophyllus styx**
- riparius, Chironomus**
- Risella 17 oil**, in *Lucilia sericata*, leg paralysis caused by 1350
- Rissa tridactyla, Ixodes uriae** on, in Norway 702
- River deltas**, endosulfan in, non-target effects of 3005
- River floodplains**  
 Culicidae in  
   in Belorussia 841  
   in Sakhalin Island 1760  
*Ixodidae* in, in Tadzhikistan 1072
- Rivers**  
 methoxychlor in  
   distribution of 1272, 1277, 1278  
   effects on fish of 1284  
   non-target effects of 1279, 1280, 1281, 1282  
   monitoring of 1283, 1292  
   residues of 1273, 1275, 1276  
*Simuliidae* in  
   in Italy 2392  
   in Poland 2391  
   sampling of 3311  
*Simulium arcticum* in, sampling of 1291  
 temephos in, non-target effects of 1691
- roversi, Aedes**
- Rivoltasia**, on *Colinus virginianus*, in USA 2001
- Rivoltasia coturnicola** 2001
- RNA** (see Ribonucleic acids)
- RNAase** (see Nuclease, ribo-)
- Ro 13-5223** (see Carbamic acid, [2-(4-phenoxyphenoxy)ethyl]-, ethyl ester)
- Road building**, *Ixodidae* as affected by 3411
- Robaxin** (see Methocarbamol)
- robertsi, Argas**
- robertsoni, Hippelates** (see *Liohippелates robertsoni*)
- robertsoni, Liohippелates (Hippelates)**
- Robin** (see *Erethacus rubecula*)
- robini, Lutzomyia**
- robustus, Macrocheles**
- robustus, Rhodnius**
- Rochalima quintana**, in *Pediculus* spp., transmission of 34
- Rock holes**, *Culicidae* in, in Missouri 3211
- Rocky Mountain spotted fever**  
 epidemiology of 234  
 in Ohio 234  
 tick transmission of 924
- Rodent burrows**  
*Latrodectus* spp. in, in Uzbekistan 2778  
*Phlebotomus dubosqi* in, in Senegal 2147
- Rodent nests**, *Gamasinae* in, in Transbaikalia 1032
- Rodentia**  
*Acari* on, in Hawaii 922  
*Amphipsylla* spp. on, in Himalayas 3186  
*Anoplura* on, in USSR 2571  
 arboviruses in, in Spain 2233  
 arthropod parasites of, in Maritime Territory 3389  
*Atopomelidae* on, in Neotropical region 286  
*Dermanyssidae* on, in Australasia 508  
*Eutrombicula batatas* on, in USA 982  
*Gamasidae* on, in Indonesia 1963  
*Hoplopleura* spp. on, in Argentina 1475  
*Hystrichopsyllidae* on, in Morocco 3183  
*Ixodidae* on, in Siberia 3083  
*Lutzomyia clautrei* on, in French Guiana 139  
*Mesostigmata* on, in Czechoslovakia 2232  
 mites on  
   in Argentina 321  
   in Brazil 2491  
*Phlebotominae* on, in Panama 2150
- Rodentia** *contd.*  
*Siphonaptera* on  
   in Argentina 321, 357  
   in Brazil 1751  
   in Burundi 49  
   in Caucasus 2868  
   in Java 2819  
   in Mongolia 2870  
   in Pyrenees 2340  
   in Scandinavia 2340  
   in Tanzania 2030  
*Trombiculidae* on  
   in Indiana 1966  
   in Indonesia 1963  
   in Kiangsu 2760  
   in West Malaysia 1973  
*Wuchereria bancrofti* in, morphology of 605
- Rodentolepis erinacei**, in, *Onthophagus furcatus*, in Bulgaria 689
- Rodentopus sciuri**  
 in Kenya 2239  
 on *Erinaceus albiventris*, in Kenya 2239
- rodhaini, Phlebotomus**
- Romania**  
*Acarus siro* in, on man 980  
*Culex molestus* in, in basements 75  
*Culicidae* in, natural enemies of 1537  
*Haematopota csikii* in 17  
*Phlebotomus caucasicus* in 1788  
*P. major* in 1788  
 synanthropic flies in, natural enemies of 453  
*Tyrophagus longior* in, on man 980
- Romanomermis culicivora**  
 against  
   *Anopheles albimanus* 377  
   *Culex quinquefasciatus*, in cemetery vases 2916  
   *Culicidae* 2610, 2954  
   *Culiseta incidens*, in cemetery vases 2916  
 culture methods for 3206  
 in  
   *Culex molestus*, development of 2934  
   *C. pipiens*  
     effects of 1229  
     effects on hemolymph proteins of 1227  
     infectivity of, effects of culture age on 2932  
   insect control using, review 1538  
   persistence of 2089  
   preyed on by, *Acanthocyclops vernalis* 3244  
   temperature as affecting 2089  
   water quality as affecting 3261  
   WHO data sheet on 117
- Romanomermis iyengari**, WHO data sheet on 92
- Romanomermis nielsenii**, rearing of, hosts for 1817
- Ronnel** (see Fenchlorphos)
- Rose Bengal**, in *Culex quinquefasciatus*, light-dependent toxicity of 2367
- Ross River virus**  
 in  
   *Aedes albopictus*, persistent infection with, polypeptide synthesis during establishment of 582  
   *Culicidae*, in New South Wales 2033
- rossica, Amphipsylla**
- rossicus, Rhipicephalus**
- rostrata, Australophya**
- rostratum, Simulium (Gnus)**
- rostratus, Gnus** (see *Simulium rostratum*)
- Rothschild, N.C.**, biography 2305
- rothschildi, Rhadinopsylla**
- Rotifera** 3013
- Keratella** 1037
- Rotifers**, in ponds, effects of insect growth regulators on 3013
- rotundisinuata, Hystrichopsylla**
- rotundus, Eubrachylaelaps**
- rousetti, Ascoschoengastia**
- Rousettus amplexicaudatus**, *Ascoschoengastia rousetti* on, in Philippines 3428
- Royal Farm virus**, in, *Argas hermanni*, in Afghanistan 695
- RP-32861** (see 1,3,4-Oxadiazol-2(3H)-one, 5-methoxy-3-(2-methoxyphenyl)-)
- RU-22090** (see Biopermethrin)
- RU-22950** (see Cyclopropanecarboxylic acid, 3-(2,2-dibromoethenyl)-2,2-dimethyl-, cyano(3-phenoxyphenyl)methyl ester, (1R-cis)-)
- Rubbish dumps, Musca** spp. in, in Assam 1595
- rubi, Macrothylacia**
- rubinotus, Culex**
- rubrofasciata, Triatoma**
- rubrovaria, Triatoma**
- rudis, Pollenia**
- rufibarbis, Formica**
- ruficapillus, Onthophagus**
- ruficorne, Simulium**
- ruficornis, Gymnodia**
- ruficornis, Parasarcophaga** (see *Sarcophaga ruficornis*)
- ruficornis, Sarcophaga** (*Parasarcophaga*)
- rufifacies, Chrysomya**
- rufipes, Hyalomma marginatum**
- runatus, Amphalius**
- runicus, Drepanocerus**
- rupium, Tabanus**
- Rural development**  
*Glossina* as affected by 1874  
 trypanosomiasis as affected by 1874
- rusticus, Aedes**
- rutilus, Toxorhynchites**
- Ruttenia loxodontis**  
 in Uganda 2451  
 in Zaire 2451  
 on *Loxodonta africana*, in Czech zoo 2451
- Rwanda**  
*Araeopsylla faini* in, on *Tadarida* 3181  
*Ophthalmognathus tenorioae* in 2237
- sabaeus, Paederus**
- Sabal, Rhodnius prolixus** in, in Venezuela 37
- Sabethes belisarioi**  
 in Brazil 2898  
 Saint Louis encephalitis, virus in, in Brazil 2898
- Sabethes chloropterus**, in Brazil 2627
- sabinae, Guntheria**
- Saccharose** (see  $\alpha$ -D-Glucopyranoside,  $\beta$ -D-fructofuranosyl)
- Saccharum officinarum** (see Sugar-cane)
- sacer, Scarabaeus**
- sacharovi, Anopheles**
- saduski, Gahrlepiea**
- saevissima, Solenopsis**
- saevus, Culicoides**
- SAFETY**  
 formulation and safe use of pesticides 527  
 occupational exposure to pesticides 1684
- safranea, Chrysomya**
- Safranine**, marker for, *Siphonaptera* 360
- sagarensis, Hunterellus**
- St. Louis encephalitis** (see Encephalitis, Saint Louis)
- saishuensis, Morellia**
- Salicornia frutescens, Aedes detritus** in holes in, in France 3297
- salinarius, Culex**
- Salmo gairdneri**, methoxychlor in, toxicity of 1285
- Salmonella**  
 in  
   birds, in Kirghizia 1033  
   *Musca domestica*, in Brazil 479  
*Salmonella bareillyi*, in *Blattaria*, in Uttar Pradesh 795  
*Salmonella enteritidis typhimurium* (see *S. typhimurium*)  
*Salmonella gallinarum*  
   in  
     *Argas persicus*, in Pakistan 247  
     poultry, pathogenicity of 247  
*Salmonella newport*, in *Formicidae*, in Uttar Pradesh 795  
*Salmonella typhimurium*  
   in  
     *Blattella germanica*, transmission of 1730  
     *Dermacentor daghestanicus*, transstadial transmission of 3084  
     *D. marginatus*, transstadial transmission of 3084  
     *D. pictus*, transstadial transmission of 3084



- Salmonella typhimurium** *contd.*  
in *contd.*  
*Rhipicephalus rossicus*, persistence of 3084  
*Xenopsylla cheopis*, parenteral infection with 1515
- Salmonella weltevreden**, in, Blattaria, in Uttar Pradesh 795
- salopiensis, Wilhelmia** (see *Simulium lineatum*)
- Salt marshes**  
*Aedes dorsalis* in, in California 1782, 2087  
*A. sollicitans* in  
in Georgia (USA) 3279  
in Rhode Island 3228  
*A. squamiger* in, in California 1782  
*A. taeniorhynchus* in, in Georgia (USA) 3279  
*Culex tarsalis* in, in California 2087  
Culicidae in, in South Carolina 2910  
*Gambusia affinis* in, effects of mosquito-control recirculation ditches on 1782  
mosquito control in 2381, 3207, 3208  
*Bacillus thuringiensis* for 2087  
drainage for 3279  
effects on arthropod fauna of 2114  
water management for 3228  
*Tabanus lineola* in, in Massachusetts 1906  
*T. nigrovittatus* in, in Massachusetts 1906
- saltator, Trichocera**
- Saltatoria**, chromosomes in 1995
- Sampling technique**  
*Blattella germanica*, buildings 2541  
*Culex quinquefasciatus* 2116  
Culicidae 2875  
mosquito larvae 1811  
capture-recapture, book 531  
sweep net data analysis 1456
- San Angelo virus**  
in  
*Aedes albopictus*  
infection of ovarioles with 2628  
transovarial transmission of 844, 2134  
Culicidae, transovarial transmission of 844
- Sancassania berlessei** (see *Caloglyphus berlessei*)
- sanctipauli, Simulium**
- Sandfly fever**  
bibliography 1254, 1255  
virus, in, *Lutzomyia longipalpis*, not replicating 635
- sanguinaria, Lutzomyia**
- sanguineum, Simulium**
- sanguineus, Anocentor**
- sanguineus, Rhipicephalus**
- sanguisuga, Culicoides**
- sanguisuga, Triatoma**
- Sanitation, Culex pipiens** and 2370
- Santa Cruz Islands, Aedes albopictus** in 1550
- santonensis, Reticulitermes**
- saperol, Anopheles**
- sapphirina, Uranotaenia**
- sapporoensis, Tabanus**
- Saprolegnia**  
in  
*Chironomus plumosus*, in Ontario 1902  
Culicidae, in Ukraine 1757
- Saprolegnia monoeca**, in, Culicidae, in USSR 1019
- Sapygidae**, in British Isles 691
- sarcimen, Laelaps**
- Sarcocystis**  
in, dog dung, in England 220  
vectors of 220
- Sarcophaga**  
in Thailand 2805  
wings in, morphometric characters of 1352
- Sarcophaga albiceps**, digestive enzymes in 3014
- Sarcophaga argyrostoma**  
eclosion in, rhythm of 1600  
gut in, passage of proteins through 200  
mating in 2721  
*Naja mossambica* venom in, toxicity of 200
- Sarcophaga argyrostoma** *contd.*  
ovarian development in, effects of diet on 476
- Sarcophaga bullata**  
abscisic acid in, inhibiting vitellogenesis 3360  
ectopic legs in, taste responsiveness in 2449  
enzymes in 1761, 3027  
eyes in, ectopic 1615  
flight in 2423  
food conversion efficiency in 3038  
mid-gut in, effects of diet on chromatin organisation in 158  
moulting hormones in, activity pattern of 2173  
ovaries in, factors affecting number of ovarioles in 3361  
parasitised by, *Nasonia vitripennis* 208, 1608  
vitellogenins in, effects of moulting hormones on synthesis of 2701
- Sarcophaga carnaria**, on man, hypersensitivity to 769
- Sarcophaga crassipalpis**  
control of, growth regulators for 464  
descriptions of 893  
diapause in, hormonal regulation of 1611  
methoprene in, development inhibition by 464
- Sarcophaga froggatti**, in human cadavers, development of 3037
- Sarcophaga hirtipes**, chromosomes in, map 3020
- Sarcophaga incislolata**  
in Czechoslovakia 897  
on man, in Czechoslovakia 897
- Sarcophaga nodosa**, enzymes in 2995
- Sarcophaga peregrina** (see *Boettcherisca peregrina*)
- Sarcophaga ruficornis**  
hind-gut in, effects of insect growth regulators on 1622  
mid-gut in  
development of 458  
effects of insect growth regulators on 674  
ovarian development in, effects of diet on 664  
ovarioles in, effects of thiourea on glycogen synthesis in 1355  
thiourea in, effects on reproduction of 2421  
visual system in, development of 655
- Sarcophaga scoparia**  
breeding season of 3364  
in Finland 3364  
in carrion, in Finland 3364
- Sarcophaga similis**  
control of, growth regulators for 464  
methoprene in, development inhibition by 464
- Sarcophagidae**  
in Azerbaijan 899  
in China 213, 216  
in Indonesia 3337  
in Nigeria 2003  
in Oceania 3337  
in Vietnam 3337  
on sheep, in Western Australia 165  
traps for 2429
- Sarcoptes**  
on domestic animals, in Zambia 1333  
on zebu, in Malaysia 2538
- Sarcoptes scabiei**  
biology of 985  
control of 985, 1142, 1147, 2525  
acaricides for 291, 292, 1661, 1673, 1959, 3093  
in Egypt 2776  
in German Democratic Republic 1721  
in German Federal Republic 1959  
in India 3093  
in Indonesia 2806  
in Mexico 291  
in New Zealand 518  
in Norway 1424, 1425  
in Sweden 1661, 1673  
in Switzerland 999  
in Turkey 519  
in UK 985, 1142, 1147, 2761  
in USA 2240, 2525  
in Zimbabwe 2006
- Sarcoptes scabiei** *contd.*  
*Malassezia pachydermatis* in, in New York State 2240  
on Asian buffalo  
in Indonesia 2806  
transfer to man of 3417  
on camel, in Haryana 3093  
on *Canis latrans*, in New York State 2240  
on cattle  
in Scotland 2761  
in Wyoming 2525  
transfer to man of 2761  
on deer, in German Democratic Republic 1721  
on dog  
in Indonesia 2806  
transfer to man of 1417  
on *Erethizon dorsatum*, in New York State 2240  
on goat, in Indonesia 2806  
on man 3417  
antibodies to 1421, 2776  
diagnosis of 514  
during neonatal period 268  
immune system and 512  
in England 1147  
in Mexico 291  
in New Zealand 518  
in Sweden 1673  
in Turkey 519  
in UK 1142  
in Zimbabwe 2006  
pruritus caused by 1417  
transfer from Asian buffalo of 3417  
on pig  
distribution pattern of 999  
effects of 985  
in German Federal Republic 1959  
in Indonesia 2806  
in Norway 1424, 1425  
in Sweden 1661  
symptoms of 999  
on *Vulpes fulva*, in New York State 2240  
outbreaks of 518  
seasonal abundance of 1424  
taxonomy of, characters distinguishing *Trixacarus caviae* and 1978, 1980  
variability in 518
- Sarcoptes scabiei bubulus** (see *S. scabiei*)
- Sarcoptes scabiei canis** (see *S. scabiei*)
- Sarcoptes scabiei caprae** (see *S. scabiei*)
- Sarcoptes scabiei suis** (see *S. scabiei*)
- Sarcoptes suis** (see *S. scabiei*)
- Sarracenia purpurea**  
*Wyeomyia smithii* in pitchers of in Michigan 587  
in New York State 839  
in Newfoundland 98
- Saskatchewan**  
insect pests in 782  
*Ornithodoros kelleyi* in, in bat roosts 954
- satyrus, Aphodius**
- Saudi Arabia**  
*Anopheles* spp. in 623  
Anoplura in 2527  
Bombyliidae in 2532  
*Cordylobia anthropophaga* in, on man 2537  
*Corethrella buettikeri* in 2531  
Hippoboscidae in 2533  
leishmaniasis in 2535  
malaria in 623  
onchocerciasis in 2534  
Phlebotominae in 2530, 2536  
*Phlebotomus papatasi* in 2535  
Scarabaeoidea in 2529  
*Simulium* spp. in 2534  
*Trox* spp. in 2528
- Saumarez Reef virus**, in, sea birds, effects of 1947
- Sausage casings**, for blood-feeding of insects 3249
- Savanna**  
*Glossina swynnertoni* in, in Tanzania 1328  
pyrethroids in, non-target effects of 2157  
tsetse control in, aerial sprays for 2401
- savignyi, Ornithodoros**
- scabiei, Sarcoptes**

- Scabies**  
epidemiology of 518, 519  
in New Zealand 518  
in Turkey 519
- scalaris, Fannia**
- scalaris, Megaelia**
- Scandinavia**  
Siphonaptera in, on small mammals 2340  
small mammals in, ectoparasites of 2338  
tick-borne encephalitis in 1946
- scanloni, Cosarcoptes**
- scanloni, Culex**
- Scapanus orarius**  
mites on, in Oregon 289  
prey of 289
- Scapanus townsendi**  
mites on, in Oregon 289  
prey of 289
- scapularis, Aedes**
- scapularis, Ixodes**
- Scarabaeidae**  
for converting animal wastes into feedstuffs 2710  
helminths in, in Uzbekistan 316  
in Corsica 2208  
in Poland 3054  
in Saudi Arabia 2529  
in cattle dung, population ecology of 1385  
in dung  
exploitation of 1392  
in France 919  
in German Federal Republic 3055  
in Morocco 3385  
role in nature of 3054  
traps for 2426
- scarabaeoides, Sphaeridium**
- Scarabaeus**, in cattle dung, in Bulgaria 1385
- Scarabaeus cornifrons** (see *S. cristatus*)
- Scarabaeus cristatus**  
in Egypt 3374  
*Spirocerca lupi* in, in Egypt 3374
- Scarabaeus puncticollis**  
in Egypt 3374  
*Spirocerca lupi* in, in Egypt 3374
- Scarabaeus sacer**  
in Egypt 3374  
*Spirocerca lupi* in, in Egypt 3374
- Scathophaga**  
population age structure in 1926  
taxonomy of 1926
- Scathophaga scybalaria**  
descriptions of 3023  
in Japan 3023  
in dung, in Hokkaido 3023
- Scathophaga stercoraria**  
descriptions of 3023  
in Irish Republic 2182  
in Japan 3023  
in UK 220, 1927  
in USA 2454, 2709  
in cattle dung  
in Michigan 2454  
in UK 1927  
movement patterns of 3050  
in dog dung, in England 220  
in dung, in Hokkaido 3023  
in pastures, in Michigan 2709  
male terminalia in 1354  
mating in 2709  
predation by 1927  
preying on, *Hydrotaea irritans*, in Irish Republic 2182  
sexual competition in 2454
- Scathophaga suilla**  
descriptions of 3023  
in Japan 3023  
in dung, in Hokkaido 3023
- Scatophagidae**, in cattle farms, in Bulgaria 902
- Scellionidae**, parasitising, Tabanidae, in France 659
- Scenedesmus acutus, Simulium ornatum**  
feeding on 1294
- Scheelea, Rhodnius prolixus** in, in Venezuela 37
- Scheloribates**  
Anoplocephalata in, in Azerbaijan 1051  
in pastures, in Azerbaijan 1051
- Scheloribates latipes**  
Anoplocephalata in, in Azerbaijan 1051  
in USSR 1051  
in pastures, in Azerbaijan 1051
- Schilbe mystus**, prey of, effects of endosulfan on 3005
- Schistocerca americana gregaria** (see *S. gregaria*)
- Schistocerca gregaria**  
chlordimeform in, mimicking octopamine 1431  
dieldrin in, metabolism of 2010  
serum in, hemagglutinins in 2561
- Schistosomiasis**, in Philippines 2804
- schiva, Tabanus**
- Schizomycetes** 29, 544, 1055, 1577, 1627, 1680, 1783, 1902, 2258, 2517, 2544, 2545, 2839, 3040, 3118, 3194
- Aerobacter** 479
- A. cloacae** 247
- Bacillus alvei** 2641
- B. anthracis** 247
- B. brevis** 2641
- B. cereus** 1038
- B. sphaericus** 586, 830, 1207, 1216, 1522, 1537, 1553, 1572, 1707, 1785, 1812, 2088, 2350, 2375, 2606, 2622, 2892, 2955, 3260, 3266
- B. subtilis** 247
- B. thuringiensis** 93, 118, 197, 310, 312, 376, 580, 581, 597, 1038, 1048, 1186, 1228, 1249, 1250, 1535, 1536, 1537, 1553, 1570, 1572, 1707, 1711, 1797, 1798, 1827, 1854, 2042, 2084, 2085, 2086, 2087, 2088, 2286, 2381, 2385, 2397, 2400, 2501, 2633, 2787, 2884, 2924, 2925, 2954, 2955, 2976, 2977, 3200, 3250, 3266, 3296, 3297, 3298, 3313
- Borrelia duttoni** 3060
- B. recurrentis** 34
- B. theileri** 3060
- Brucella** 3413
- Clostridium botulinum** 2186
- Corynebacterium pyogenes** 890
- Diphtheroid** 3157
- Enterobacter aerogenes** 1727
- Escherichia coli** 479, 980, 1515, 1633, 2047, 3157
- Flavobacterium indothelicum** 247
- Listeria monocytogenes** 250, 262, 1033, 1515
- Micromonospora chalcone** 922
- Moraxella bovis** 2200
- Mycobacterium** 261
- Mycoplasma gallisepticum** 1029
- Pasteurella tularensis** 237, 496, 1380, 1515, 3215
- Proteus** 479, 1920, 3157
- Pseudomonas** 174, 479
- P. aeruginosa** 1093, 1633
- P. pyocyanea** 247
- Salmonella** 479, 1033
- S. bareilly** 795
- S. gallinarum** 247
- S. newport** 795
- S. typhimurium** 1515, 1730, 3084
- S. weltevreden** 795
- Serratia** 3197
- S. marcescens** 247
- Sporosarcina lutea** 247
- Staphylococcus albus** 1633, 2228, 3157
- Streptococcus faecalis** 1633, 3157
- S. gallinarum** 247
- Yersinia enterocolitica** 880, 1515
- Y. pestis** 50, 355, 359, 364, 1043, 1130, 1185, 1515, 1688, 1753, 2317, 2319, 2801
- Y. rodentium** 250, 1515
- Schoelea zonensis, Rhodnius prolixus** in, in Panama 2020
- Schoenbaueria nigra** (see *Simulium nigrum*)
- Schoenbaueria pusilla** (see *Simulium pusillum*)
- Schoengastia**  
in Asiatic-Pacific region 513  
in West Malaysia 2811
- Schoengastia bicoxalae**  
sp. nov., description of 3426
- Schoengastia bicoxalae** contd.  
in Papua New Guinea 3426  
on *Isodon macrourus*, in Papua New Guinea 3426  
on *Thylogale brunii*, in Papua New Guinea 3426  
on *Wallabia agilis*, in Papua New Guinea 3426
- Schoengastia diannae**, descriptions of 513
- Schoengastia buxsolli**  
sp. nov., description of 513  
in Thailand 513  
on *Rattus rattus*, in Thailand 513
- Schoengastia invisitata**  
in USSR 1071  
on bat, in Uzbekistan 1071
- Schoengastia kanhaensis**  
in Thailand 513  
on *Rattus rattus*, in Thailand 513
- Schoengastia philipi**, descriptions of 513
- Schoengastia propria**  
in Thailand 513  
on *Rattus rattus*, in Thailand 513
- Schoengastia taylori**, descriptions of 513
- Schoengastia vandersandei**, descriptions of 513
- Schoengastia vieta**  
in Malaysia 513  
on rat, in Malaysia 513
- Schoengastia whartoni**, descriptions of 513
- Schoengastiella ligula**  
in India 3090
- Rickettsia tsutsugamushi** in, in Maharashtra 3090
- Schools**  
*Blatta orientalis* in, in UK 3157
- Dermatophagoides** spp. in, in Uttar Pradesh 2773
- Schoutedenichia frici**  
sp. nov., description of 1660  
on *Crocidura*, in Africa 1660
- schultzei, Culicoides**
- schwetzi, Phlebotomus** (see *Sergentomyia schwetzi*)
- schwetzi, Sergentomyia (Phlebotomus)**
- Sciomyzidae**  
in France 1349  
in Italy 9
- sciuri, Neohaematopinus sciuri, Rodentopus sciuricola, Aplodontopus sciuricola, Hoplopleura Sciuropsis**, taxonomy of 284
- Sciuropsis guevarai**  
sp. nov., description of 284  
in Spain 284  
on *Aethechnus algeris*, in Spain 284
- sciuropteri, Neohaematopinus sciurorum, Ceratophyllus Sciurotamias davidianus, Macrostylophora paoshanensis** on, in China 818
- Sciurus carolinensis**  
Anoplura on, in Tennessee 1189  
*Orchopeas howardii* on, in Tennessee 1189
- Scolioidea**, in British Isles 691
- scoparia, Sarcophaga**
- Scorpamines**, in *Androctonus mauretanicus* venom 2253
- Scorpio maurus palmatus**, in Israel 1981
- Scorpiones**  
chromosomes in 1478  
in Argentina 1477  
in Israel 1981  
in Mexico 1676  
in Mozambique 1678  
in Virgin Islands 1008  
on man  
cardiovascular effects of stings by 2256  
in Spain 1427  
myocarditis caused by 1007  
phylogeny of 1478  
venom glands in 1428
- Scorpionidae**, in Arabian Grand Maghreb, bibliography 2251
- Scotia segetum** (see *Agrotis segetum*)
- Scrub typhus** (see also *Rickettsia tsutsugamushi*)
- sculleni, Catallagia sculpturatus, Centruroides**
- Scutacaridae**, in mammal nests, in USSR 1053



- scutellare*, *Leptotrombidium*  
*scutellaris*, *Aedes*  
*Scutovertex*, key 994  
*Scutoverticidae*, key 994  
*scybalaria*, *Scathophaga*  
 SD-43775 (see Fenvalerate)  
**Sea birds**  
   arboviruses in  
     effects of 1947  
     review 1947  
**Sea lion**, *Californian* (see *Zalophus californianus*)  
**Sea ports**, plague prevention in 50  
*Sebacil* (see *Phoxim*)  
*secundus*, *Ctenophthalmus* congener  
*securiformis*, *Arrenurus*  
*Seducin*, in *Nauphoeta cinerea*, site of secretion of 3160  
*segetum*, *Agrotis* (*Scotia*)  
*segetum*, *Scotia* (see *Agrotis segetum*)  
*segnis*, *Leptopsylla*  
*sejfadinei*, *Culicoides*  
*selangorensis*, *Radfordia*  
**Selenium sulfide**  
   against  
     *Cheyletiella* spp., on cat 983  
     *Demodex* spp., on man 726  
     *D. cati*, on *Uncia uncia* 2234  
*sellnicki*, *Ceratozetella*  
*semlidis*, *Trichogramma*  
**Semliki Forest virus**  
   in  
     *Aedes albopictus*  
       cell fusion caused by 114  
       effects of pH on 1567  
       pathogenicity of 1569  
       persistent infection with 2639  
       polypeptide synthesis during establishment of 582  
       replication of 2376, 2639  
       subviral particles from 113  
     *A. pseudoscutellaris*, effects of pH on 1567  
**Senegal**  
   *Aedes luteocephalus* in, viruses in 1244  
   *Glossina* spp. in 1300, 1301  
   *Haemolaelaps* spp. in 3422  
   Ixodoidea in, viruses in 704  
   *Phlebotomus duboscqi* in, flagellates in 2147  
   trypanosomiasis in 1300, 1301  
   *Tunga penetrans* in, on man 566  
*Sepedon fuscipennis*  
   in USA 3372, 3373  
   parasitised by  
     *Trichogramma* spp., in New York State 3373  
     *T. julianoi*, in New York State 3372  
   *Sepedon phegea*, in France 1349  
*Sepiapterin* (see 4(1H)-Pteridinone, 2-amino-7,8-dihydro-6-(2-hydroxy-1-oxopropyl)-, (S)-)  
**Sepsidae**  
   in England 2456  
   in Japan 2419  
   in cattle farms, in Bulgaria 902  
   preyed on by, *Scathophaga stercoraria*, in UK 1927  
   taxonomy of 2419  
**Sepsis**  
   in England 2456  
   in Japan 2419  
   taxonomy of 2419  
**Sepsis albopunctata**  
   *Howardula albopunctata* in, in Andhra Pradesh 1914  
   in India 1914  
   in cattle dung, in Andhra Pradesh 1914  
**Sepsis cynipsea**  
   in UK 2456  
   in sheep dung, in England 2456  
**Sepsis neocynipsea**  
   in UK 2456  
   in sheep dung, in England 2456  
**Sepsis nitens**  
   *Howardula albopunctata* in, in Andhra Pradesh 1914  
   in India 1914  
   in cattle dung, in Andhra Pradesh 1914  
**Sepsis orthocnemis**  
   in UK 2456  
   in sheep dung, in England 2456  
*septentrionalis*, *Boettcherisca*  
*septentrionalis*, *Toxorhynchites rutilus*  
*serdjukovae*, *Haemogamasus*  
*sergenti*, *Phlebotomus*  
*sergentii*, *Anopheles*  
**Sergentomyia**  
   in Bihar 1261, 1262  
   in Saudi Arabia 2530  
   taxonomy of, enzymes as characters for 2967  
*Sergentomyia affinis*  
   in Kenya 2972  
   *Leishmania* spp. in, in Kenya 2972  
   on lizard, in Kenya 2972  
*Sergentomyia africana*  
   in Kenya 2972  
   *Leishmania* spp. in, in Kenya 2972  
   on lizard, in Kenya 2972  
*Sergentomyia africana magna*, in Senegal 2147  
*Sergentomyia antennata*  
   in Kenya 2972  
   in Sudan 634  
   *Leishmania* spp. in, in Kenya 2972  
   on lizard, in Kenya 2972  
*Sergentomyia arpaklensis* (see *S. dentata*)  
*Sergentomyia babu*  
   appendages in, abnormalities in 1267  
   flagellates in, in Bihar 1266  
   in India 1265, 1266, 1267  
*Sergentomyia baghdadis*  
   control of, insecticides for 1260  
   in India 1260  
   on man, in Assam 1260  
*Sergentomyia bailyi*  
   appendages in, abnormalities in 1267  
   in India 1267  
*Sergentomyia barraudi*, in India 1265  
*Sergentomyia bedfordi*  
   in Kenya 2972  
   *Leishmania* spp. in, in Kenya 2972  
   on lizard, in Kenya 2972  
*Sergentomyia berentensis*  
   in Malagasy Republic 2389  
   on man, in Malagasy Republic 2389  
*Sergentomyia christophersi*, in India 1262  
*Sergentomyia clydei*  
   in India 1262  
   in Senegal 2147  
   in Sudan 634  
*Sergentomyia dentata*  
   flight height in 2145  
   in USSR 1688, 2145  
   in cotton fields, in Turkmenia 2145  
   *Leishmania* spp. in, in Kirgizia 1688  
*Sergentomyia dubia*, in Senegal 2147  
*Sergentomyia durenti*  
   descriptions of 135  
   taxonomy of, characters distinguishing *S. hamoni* and 135  
*Sergentomyia hamoni*  
   descriptions of 135  
   in Congo 136  
   phenology of 136  
   taxonomy of  
     characters distinguishing *S. durenti* and 135  
     characters distinguishing *S. ingrami* and 135  
*Sergentomyia indica*  
   flagellates in, in Bihar 1266  
   in India 1265, 1266  
*Sergentomyia ingrami*  
   descriptions of 135  
   taxonomy of, characters distinguishing *S. hamoni* and 135  
*Sergentomyia kauli*, in India 1262  
*Sergentomyia lesleyae*, in Sudan 634  
*Sergentomyia magna* (see *S. africana magna*)  
*Sergentomyia minuta*  
   in France 636  
   in Italy 764  
   in Portugal 1843  
   in animal housing, in Italy 764  
*Sergentomyia minuta sinkiangensis*  
   biology of 421  
   in China 421  
*Sergentomyia schwetzi*  
   in Kenya 2972  
   in Senegal 2147  
   in Sudan 634  
   *Leishmania* spp. in, in Kenya 2972  
   on lizard, in Kenya 2972  
*Sergentomyia shortii*  
   control of, insecticides for 1260  
   flagellates in, in Bihar 1266  
   in India 1260, 1264, 1265, 1266  
   on man, in Assam 1260  
   variation in 1264  
*Sergentomyia squamipleuris indica* (see *S. indica*)  
*Sergentomyia zeylanica*, in India 1262  
*sericata*, *Lucilia* (*Phaenicia*)  
*sericata*, *Phaenicia* (see *Lucilia sericata*)  
**L-Serine**  
   in *Anopheles stephensi*, effects of *Plasmodium berghei* on 1199  
   in *Psoroptes cuniculi* 2486  
   in *Psoroptes ovis* 2486  
**DL-Serine**, 2-[(2,3,4-trihydroxyphenyl)methyl]hydrazide (see Benserazide)  
*Serinus canarius* (see Canary)  
**Serotonin** (see 1H-Indol-5-ol, 3-(2-aminoethyl)-)  
*serrata*, *Guntheria*  
*serrata*, *Linguatula*  
*serrata*, *Polyplax*  
*Serratia*, in, *Anopheles stephensi*, pathogenicity of, increased by *Plasmodium* 3197  
*Serratia marcescens*  
   in  
     *Argas persicus*, in Pakistan 247  
     poultry, pathogenicity of 247  
*serrulatus*, *Tityus*  
*Sesamex* (5-[1-[2-(2-ethoxyethoxy)ethoxy]ethoxy]-1,3-benzodioxole)  
   in *Blaberus discoidalis*, inhibiting dieltrichin metabolism 332  
*Setaria yehi*, in, *Anopheles franciscanus*, in California 2083  
*Setifer setosus*, *Haemaphysalis simplicima*  
   on, in Malagasy Republic 3060  
*setiger*, *Sperchon*  
*setosa*, *Neopsylla*  
*setosus*, *Atopophthirus*  
*severini*, *Psychoda*  
**Sewage**, sprinkler irrigation with, effects on mosquitoes of 2368  
**Sewage systems**  
   *Culex nigripalpus* in, in Florida 373  
   *C. quinquefasciatus* in, in Florida 373  
   fly control in, insecticides for 2168  
   insect growth regulators in, non-target effects of 3024  
   *Limnophyes minimus* in, in England 2168  
   *Metriocnemus hygroptetricus* in, in England 2168, 2719  
   midge control in, insect growth regulators for 1366, 2412  
   mosquito control in  
     insecticide drips for 1709  
     monolayers for 373  
**Sewage treatment ponds**, mosquito control in, *Poecilia reticulata* for 2094  
**Sex pheromones**  
   *Amblyomma hebraeum* 1405  
   *A. maculatum* 926  
   *A. tholloni* 1405  
   *A. variegatum* 1405  
   *Blattella germanica* 26, 549  
   *Culicoides nubeculosus* 631  
   *Dermacentor andersoni* 3404  
   *D. variabilis* 3404  
   *Glossina* spp. 148  
   *G. austeni* 649  
   *G. morsitans* 648, 762, 874, 2679, 2683, 3325  
   *Haematobia irritans* 1898  
   *Hyalomma asiaticum* 2744  
   *Latrodectus hesperus* 303  
   *L. mactans* 303  
   *Monomorium pharaonis* 229  
   *Musca domestica* 874, 1073, 1360, 2706, 3325  
   *Nauphoeta cinerea* 3160  
   *Ornithodoros erraticus* 3074  
   *Periplaneta americana* 789, 2553, 2554  
   *Rhipicephalus sanguineus* 926  
   *Vespa crabro* 1631  
   book 2262, 2787  
   measuring electroantennogram responses to 1686  
   release patterns of 2270  
**sexta**, *Manduca*

## Seychelles

- Aedes albopictus* in, viruses in 1825  
dengue in 1825

**shastensis, Geomydoecus****Sheep (*Ovis aries*)**

- Amblyomma variegatum* on, in Malagasy Republic 3060  
Argasidae on, in Iran 2211  
arthropod pests of  
in Queensland 16  
in Sudan 1520  
in Wyoming 2524  
*Babesia* spp. in, in Egypt 2756  
*B. motasi* in  
in Netherlands 1410  
in Wales 1948  
bluetongue virus in  
in Idaho 3282  
in Sudan 1520  
*Boophilus microplus* on 3060  
Calliphoridae on  
in Australia 164  
in Western Australia 165  
*Cochliomyia hominivorax* on  
in Mexico 456  
in Texas 1919  
*Cowdria ruminantium* in, in Réunion 958  
*Ctenocephalides canis* on, effects on blood of 47  
Culicidae on, in South Africa 84  
*Culicoides* spp. on  
in New York State 417  
in South Africa 84  
*C. variipennis* on, in Idaho 3282  
*Damalinea ovis* on, in Spain 2850  
diazinon in, persistence of 2563  
*Dicrocoelium dendriticum* in, in Yugoslavia 688  
*D. lanceolatum* in, in France 2727  
ectoparasites of, in Philippines 2813  
*Eperythrozoon ovis* in, mosquito transmission of 2129  
*Epicauta lemniscata* on, diagnosis of poisoning by 230  
fleece rot in, resistance to 172, 173, 176, 177  
fly control on 162, 166, 180, 181  
chemicals for 170  
cost of 163  
drying agents for 2174  
economics of 1924  
insecticides for 183  
lowering fleece moisture for 175  
management practices for 178, 179  
pizzle dropping for 182  
resistance for 171  
testing insecticides for 169  
*Haemaphysalis punctata* on, in Netherlands 1410  
*Hippobosca variegata* on, in Saudi Arabia 2533  
*Hyalomma impressum* on, immunity to 1939  
*Hydrotaea irritans* on, in UK 3048  
*Ixodes ricinus* on, in UK 3048  
Ixodidae on, in Egypt 2752  
Ixodoidea on  
in Europe 1948  
role in back-rolling of 320  
*Linognathus* spp. on, in Iran 503  
louping ill, virus in, in UK 1946  
*Lucilia caesar* on, in Norway 2408  
*L. cuprina* on  
effects of skin structure on susceptibility to 193  
in Australia 162, 779, 2832  
in New South Wales 175, 182  
in Victoria 2199  
leakage of plasma proteins to skin surface caused by 3039  
oviposition by 166  
effects of bacteria on 174  
resistance to 171, 176, 177, 178, 2718  
*L. illustris* on, in Norway 2408  
*L. sericata* on  
in Poland 2707  
in Switzerland 471  
*Melophagus ovinus* on  
mortality of 3357  
resistance to 666  
role in back-rolling of 320  
Oestroidae on, book 2691

**Sheep contd.**

- Oestrus ovis* on  
development of 3335  
in USSR 3331  
*Ornithodoros lahorensis* on, in Iran 2211  
Peaton virus in, antibodies to 1253  
pest control on 2524  
Phthiraptera on, in Afrotropical region, book 1177  
*Psoroptes ovis* on  
in Iran 503  
in Lesotho 285  
in UK 3101  
*Rhipicephalus* spp. on, in Kenya 1641  
*R. evertsi* on, paralysis caused by 3395  
*R. sanguineus* on, in Egypt 3394  
*Simulium nigrum* on, in USSR 2973  
*Theileria* spp. in, in Egypt 2756  
tick-borne diseases of, in Europe 1948  
*Trypanosoma* spp. in, tolerance of 3327, 3328  
*T. congolense* in, tsetse transmission of 1870  
*T. evansi* in 184  
*Wohlfahrtia magnifica* on, in Kazakhstan 3349  
**Sheep dips**, uptake of fluid from 2563  
**Sheep dung**  
*Lucilia sericata* in, in Poland 2707  
Scarabaeidae in, in Morocco 3385  
Sepsidae in, in England 2456  
**Sheep folds**, Gamasinae in, in Transbaikalia 1032  
**Sheep, Kamchatka snow-white** (see *Ovis nivicola*)  
*Shelfordella tartara*, sternal gland in, functions of 3163  
**shimba, Onthophagus obliquus**  
**shintienensis, Aedes japonicus** (see *A. japonicus*)  
Ships, mosquito control in 370  
**shnitnikovi, Hybomitra**  
**Shops, Blatta orientalis** in, in UK 3157  
**shorttli, Sergentomyia**  
**Shrew**  
arthropod parasites of, in USSR 1046  
Siphonaptera on  
in Pyrenees 2340  
in Scandinavia 2340  
**Shrew, common** (see *Sorex araneus*)  
**Shrew, house** (see *Suncus murinus*)  
**Shrew, pigmy** (see *Sorex minutus*)  
**Shrew, short-tailed** (see *Blarina brevicauda*)  
**Shrimp**  
in fresh water, effects of pyrethroids on 2157  
pyrethroids in, toxicity of 876  
*Shunsennia*, taxonomy of 3095  
**Sialic acids**, in *Heterometrus scaber* venom 3434  
**siangensis, Copris**  
**sibirica, Amphipsylla**  
**sibirica, Forcipomyia**  
**Sicarius**, on man, effects of bites by 1478  
**Sierra Leone**  
onchocerciasis in 1111  
*Simulium* spp. in 1111  
**sierrensis, Aedes**  
**Sigara ornata**  
in USA 2046  
parasitised by, *Hydrachna coniecta*, in New York State 2046  
*Sigmodon hispidus*, Hoplopleuridae on, in Mexico 1465  
**signatus, Ixodes**  
**silaceus, Chrysops**  
**Silage, Stomoxys calcitrans** in, in Florida 3352  
**silantiewi, Oropsylla**  
Silica, against, *Nosopsyllus fasciatus* 2578  
Silicate, in *Simulium* breeding water 2666  
Silicate(2-), hexafluoro-, disodium, in *Musca domestica*, diflubenzuron delaying toxic effects of 1892  
**Silpha carinata**  
*Hymenolepis uncinata* in, in Bulgaria 689  
in Bulgaria 689  
**silvarum, Dermacentor**  
**silvatica, Leptopsylla** (see *Peromyscopsylla silvatica*)  
**silvatica, Peromyscopsylla (Leptopsylla)**  
**Silvius**, in Uzbekistan 1070

**simici, Phlebotomus****similis, Culicoides****similis, Parasarcophaga** (see *Sarcophaga similis*)**similis, Sarcophaga (Parasarcophaga)****Simmondsia paradoxa**, in, *Aphodius haemorrhoidalis*, in Bulgaria 689**simplex, Cediopsylla****simplex, Citelophilus****simplicicolor, Simulium****simplicima, Haemaphysalis****simpsoni, Aedes****simpsoni, Culex****simulans, Pulex****simulator, Culex****simulator, Culicoides****Simuliidae**

- bacteria fed on by, in Finland 1577  
biology of 2392  
cephalic fans in, capture of fine particles by 2667  
chromosomes in 1995  
control of  
biological 1535, 2086, 3313  
evaluating agents for 2396  
insecticides for 1289, 1803  
non-target effects of 1854  
repellents for 1288  
evaluating of 1856  
timing of 3311  
*Culicinomyces clavosporus* in, pathogenicity of 1829  
*Diffingieria turgenica* in 1890  
helminths in, in Uzbekistan 316  
in Austria 3316  
in Italy 2392  
in Morocco 2674  
in Nearctic region, book 2587  
in Nigeria 2003  
in South Africa 2139  
in Transbaikalia 1067  
in Ukraine 1079  
in Zaïre 2673  
in rivers, sampling of 3311  
in streams, in Newfoundland 3313  
insecticide resistance in 1803  
insecticide susceptibility in, determination of 2675  
maxillary sensilla in 3309  
Mermithidae in 1134  
host specificity of 643  
in Newfoundland 643  
Microsporidia in, in USSR 1045  
natural enemies of, in Ukraine 1059  
on aquatic plants, in Poland 2394  
on cattle  
effects of 1290  
effects on productivity of 1521  
in Alberta 1288, 1289  
on deer, in German Democratic Republic 1721  
*Onchocerca volvulus* in, transmission of 2398  
pathogens of, bibliography 2517  
phagostimulants for 1471  
physiological age of, determining of 2874  
potassium hydroxide in, morphological changes caused by 1846  
predators of, in USSR 1045  
stream parameters as affecting 141  
taxonomy of, described by J. W. Meigen 3315  
**Simuliini**, taxonomy of 1846  
**Simulium**  
cell cultures from, nematode culture in 2381  
chromosomes in 1579  
control of 1705  
biological 3313  
in Philippines 2813  
in Poland 2391  
in Saudi Arabia 2534  
in Sierra Leone 1111  
in Transbaikalia 1067  
in Ukraine 1059  
in streams, in Newfoundland 3313  
insecticides in, determining of susceptibility to 3190  
*Mansonella ozzardi* in, in Brazil 1580  
maxillary sensilla in 3309  
on cattle, in Alberta 1287  
on man, in Colombia 2156  
pathogens of, in Guatemala 144



- Simulium* contd.**  
 predators of, detecting of 1482  
 respiratory organs in 1853  
 taxonomy of 1846  
   isoenzymes as characters for 53
- Simulium adersi***, life history of 2979
- Simulium albivirgulatum***  
 in Zaïre 1847  
 on man, in Zaïre 1847  
*Onchocerca volvulus* in, in Zaïre 1847
- Simulium amazonicum***  
 in Brazil 1580, 2399  
*Mansonella ozzardi* in, in Brazil 1580  
 taxonomy of, characters distinguishing *S. argenticutum* and 2399  
 complex of  
   on man  
     distribution pattern of 3318  
   in Guyana 3318
- Simulium angustitarse***  
 habitats of 1076  
 in USSR 1054, 1076, 1586  
 overwintering in 1076  
 parasitised by  
   Hydrachnellae, in Ukraine 1054  
   Sperchontidae, in USSR 1586
- Simulium arcticum***  
 control of  
   insecticides for 1270, 1271, 1272, 1273, 1274, 1275, 1276, 1277, 1278, 1286, 1289, 1292  
   non-target effects of 1279, 1280, 1281, 1282, 1283, 1284, 1292  
   timing of 1271  
 in Canada 1270, 1271, 1272, 1286, 1287, 1289, 1291, 1292  
 in rivers, sampling of 1291  
 on cattle, in Alberta 1286, 1287, 1289
- Simulium argenteostriatum***  
 habitats of 1076  
 in USSR 1076  
 overwintering in 1076
- Simulium argentiscutum***  
 sp. nov., description of 2399  
 biology of 2399  
 in Brazil 2399  
 in Colombia 2399  
*Mansonella ozzardi* in, in Brazil 2399  
 on man, in Brazil 2399
- Simulium argus***, in USA 2118
- Simulium argyreatum***  
 food of 1037  
 in German Federal Republic 1268  
 in Poland 2391  
 in USSR 1037, 1054, 1586  
 Microsporidia in, in German Federal Republic 1268  
 parasitised by, Hydrachnellae, in Ukraine 1054  
 taxonomy of  
   characters distinguishing *S. paragyreatum* and 424  
   *Simulium noelleri* as synonym of 424  
   *S. noelleri* misidentified as 3315  
   *S. rheophilum* as synonym of 3315  
   *S. subornatum* as synonym of 424
- Simulium aureum*** (see also *Eusimulium aureum*)  
 in USSR 1054  
 parasitised by, Hydrachnellae, in Ukraine 1054
- Simulium auricoma***  
 habitats of 1076  
 in USSR 1076  
 overwintering in 1076
- Simulium austeni***  
 in Poland 2391  
 life-cycle of 2391  
 taxonomy of, synonym of *S. posticum* 3315
- Simulium balcanicum***, in USSR 1054
- Simulium brachyantherum***  
 in USSR 1023  
 resting places of 1023
- Simulium brevidens***  
 habitats of 1076  
 in USSR 1076  
 overwintering in 1076
- Simulium buisseti***  
 sp. nov., description of 2673  
 in Zaïre 2673
- Simulium callidum***  
 in Guatemala 144, 1295, 1585
- Simulium callidum* contd.**  
 parous rate in 1585  
 pathogens of, in Guatemala 144
- Simulium canariense***, taxonomy of, synonym of *S. pseudoequinum* 2670
- Simulium choldokovskii***  
 in USSR 1067  
 Mermithidae in, in Transbaikalia 1067  
 on man, in Transbaikalia 1067
- Simulium codeanui***  
 habitats of 1076  
 in USSR 1076  
 overwintering in 1076
- Simulium costatum***  
 habitats of 1076  
 in German Federal Republic 1268  
 in USSR 1076  
 Microsporidia in, in German Federal Republic 1268  
 overwintering in 1076
- Simulium crenobium***  
 in German Federal Republic 1268  
 Microsporidia in, in German Federal Republic 1268
- Simulium damnosum***  
 control of  
   insecticides for 2668  
   non-target effects of 1691  
 enzymes in 3314  
 gonotrophic cycle in 2975  
 illustrations of 143  
 in Ivory Coast 1691, 2975  
 in Nigeria 637  
 in Sierra Leone 1111  
 in Upper Volta 147  
 migration in 1850  
*Onchocerca volvulus* in, transmission of 147  
 particle sizes taken up by 2668  
 taxonomy of, enzymes as characters for 3314  
 complex of  
   control of 1702, 2671  
   insecticides for 1508, 1704, 2672  
   evaluating of 1703  
   *Gastromermis* spp. in, in Ivory Coast 145  
   gut in, passage of food through 427, 428  
   in Ghana 2152  
   insecticides in, passage through gut of 428  
   *Isomermis lairdi* in, in Ivory Coast 145  
   key 143  
   on man  
     in Nigeria 2671  
     in Togo 1581  
     in Upper Volta 2672  
   *Onchocerca volvulus* in, transmission of 3310  
   plant feeding in, in Togo 1581  
   predators of, in Ivory Coast 1849  
   rearing of, techniques for 2981  
   resting places of 2676, 2677  
   seasonal size variation in 641  
   taxonomy of 2673  
   enzymes as characters for 3314  
   *Tetrahymena* spp. in, in Ivory Coast 429  
   traps for 2152
- Simulium decimatum***  
 in USSR 1067  
 Mermithidae in, in Transbaikalia 1067
- Simulium decorum***  
 control of, insecticides for 2980  
 in Canada 1286, 3311  
 in USA 1851  
 on cattle, in Alberta 1286  
 on man, feeding by 2395  
*Onchocerca lienalis* in, development of 1852  
*O. volvulus* in, development of 1852  
 population dynamics of 1851  
 rearing of  
   apparatus for 2981  
   techniques for 431, 2395
- Simulium equinum***  
 biology of 426  
 in France 426  
 in Poland 2391  
 in UK 2670  
 life-cycle of 2391
- Simulium equinum bianchii***  
 taxonomy of, characters distinguishing *S. e. ivashentzovi* and 1080  
 variability in 1080
- Simulium equinum ivashentzovi***  
 taxonomy of, characters distinguishing *S. e. bianchii* and 1080  
 variability in 1080
- Simulium erimoense***  
 sp. nov., description of (in *Eusimulium*) 2665  
 in Japan 2665  
 Mermithidae in, in Hokkaido 2665
- Simulium erythrocephalum***  
 control of, insecticides for 2668  
 food of 1037  
 in Czechoslovakia 1857  
 in Poland 2391  
 in USSR 1037  
 life-cycle of 2391  
 particle sizes taken up by 2668  
 population age-structure in 1857
- Simulium exiguum***  
 in Colombia 638  
 on man, in Colombia 638  
*Onchocerca volvulus* in, transmission of 638
- Simulium galeratum***, in Poland 2391
- Simulium griseicollae***  
 in Sudan 1841  
*Onchocerca gutturosa* in, in Sudan 1841
- Simulium guianense***  
 feeding behaviour in 1269  
 in Brazil 1269  
 on man, in Brazil 1269
- Simulium horacioi***  
 sp. nov., description of 1582  
 in Guatemala 1582  
 in coffee plantations, in Guatemala 1582  
 on man, in Guatemala 1582  
*Onchocerca volvulus* in, transmission of 3312
- Simulium horokaense***  
 sp. nov., description of 2665  
 in Japan 2665  
 on man, in Hokkaido 2665
- Simulium ibariense***, in Poland 2391
- Simulium incrustatum***  
 control of, insecticides for 3317  
 in Guyana 3317  
 complex of  
   on man  
     distribution pattern of 3318  
   in Guyana 3318
- Simulium jenningsi***  
 in USA 1855  
 nectar-feeding in 1855  
 parity in 1855
- Simulium johannseni duplex***, in Canada 3311
- Simulium johannseni johannseni***  
 in Canada 3311  
 on cattle, in Manitoba 3311  
 on horse, in Manitoba 3311  
 on man, in Manitoba 3311
- Simulium lahillei***, taxonomy of, characters distinguishing *S. muisorum* and 432
- Simulium latinum***, in Morocco 2674
- Simulium latipes***  
 habitats of 1076  
 in German Federal Republic 1268  
 in USSR 1067, 1076  
 Mermithidae in, in Transbaikalia 1067  
 Microsporidia in, in German Federal Republic 1268  
 overwintering in 1076
- Simulium latizonum***, in Morocco 2674
- Simulium lineatum***  
 biology of 426  
 in France 426  
 in Poland 2391  
 in UK 2670  
 in USSR 1054
- Simulium longipalpe***  
 in USSR 1067  
 on man, in Transbaikalia 1067
- Simulium luggeri***  
 in Canada 2669, 3311  
 larvae of, distinguishing instars of 2669  
 on cattle, in Manitoba 3311  
 on horse, in Manitoba 3311  
 on man, in Manitoba 3311

- Simulium malyshevi***  
in USSR 1067  
Mermithidae in, in Transbaikalia 1067
- Simulium mediterraneum*** (see also *Simulium pseudoequinum*)  
biology of 426, 642  
in France 426  
in USSR 430, 642, 1023, 1054  
larvae of, variation in sexual dimorphism in 430  
Microsporidia in, in Ukraine 642  
preyed on by, *Hydropsyche angustipennis*, in Ukraine 642  
resting places of 1023  
taxonomy of, synonym of *S. pseudoequinum* 2670
- Simulium meridionale***  
in Canada 3311  
on cattle, in Manitoba 3311  
on man, in Manitoba 3311
- Simulium metallicum***  
descriptions of 1582  
in Colombia 638  
in Costa Rica 2154  
in Guatemala 144, 1295, 1582, 1585  
*Mesomerismis travisi* in, in Costa Rica 2154  
on man  
distribution pattern of 3318  
in Colombia 638  
*Onchocerca volvulus* in, transmission of 638, 3312  
parous rate in 1585  
pathogens of, in Guatemala 144  
taxonomy of, characters distinguishing *S. horacioi* and 1582
- Simulium mexicanum***  
in Guatemala 1585  
parous rate in 1585  
taxonomy of, characters distinguishing *S. muiscorum* and 432
- Simulium monticola***, group of, in USSR 1076
- Simulium morsitans***  
in Poland 2391  
life-cycle of 2391
- Simulium muiscorum***  
sp. nov., description of 432  
in Colombia 432
- Simulium neavei***  
group of  
control of 1702  
in Zaire 2673
- Simulium nigrirarse***, life history of 2979
- Simulium nigrum***  
in USSR 2973  
on cattle, in USSR 2973  
on dog, in USSR 2973  
on goat, in USSR 2973  
on sheep, in USSR 2973  
outbreaks of 2973
- Simulium noelleri***  
taxonomy of  
misidentified as *S. argyreatum* 3315  
synonym of *S. argyreatum* 424
- Simulium ochraceum***  
gonotrophic cycle in 1585  
in Guatemala 144, 1295, 1585  
on man, distribution pattern of 3318  
*Onchocerca volvulus* in  
development of 1295  
transmission of 1585, 3312  
uptake from man of 1584, 2151  
parous rate in 1585  
pathogens of, in Guatemala 144
- Simulium ornatipes***, zinc in, effects on water relations of 2393
- Simulium ornatum***  
*Coelomycidium simuli* in, localisation of 1065  
control of, insecticides for 2668  
feeding behaviour in 1293, 1294  
habitats of 1076  
illustrations of 3316  
in Austria 3316  
in German Federal Republic 465, 1268  
in Poland 2391  
in USSR 1054, 1076, 1586  
life-cycle of 2391  
Microsporidia in, in German Federal Republic 1268  
on cattle  
distribution pattern of 128
- Simulium ornatum* contd.**  
on cattle contd.  
in German Federal Republic 465
- Onchocerca gutturosa*** in, production of 585  
overwintering in 1076  
parasitised by  
Hydrachnellae, in Ukraine 1054  
Sperchontidae, in USSR 1586  
particle sizes taken up by 2668
- Simulium ovazzae***  
in Zaire 2673  
on crab, in Zaire 2673
- Simulium panamense***  
in Costa Rica 2154  
*Mesomerismis travisi* in, in Costa Rica 2154
- Simulium paramorsitans***  
in Poland 2391  
life-cycle of 2391
- Simulium parargyreatum***  
sp. nov., description of 424  
in USSR 424
- Simulium pathrushevae***  
sp. nov., description of (in *Cnetha*) 423  
biology of 423  
in USSR 423
- Simulium penobscotensis***  
breeding places of 1848  
in USA 1848
- Simulium pictipes***  
*Onchocerca lienalis* in, development of 1852  
rearing of, techniques for 431
- Simulium posticatum***, taxonomy of,  
*Simulium austeni* as synonym of 3315
- Simulium pseudoequinum*** (see also *Simulium mediterraneum*)  
in UK 2670  
in USSR 2663  
larvae of, generation variability in 2978  
morphology of, effects of biotope on 2663  
taxonomy of  
*Simulium canariense* as synonym of 2670  
*S. mediterraneum* as synonym of 2670
- Simulium pusillum***, in Poland 2391
- Simulium reptans***  
illustrations of 3316  
in Austria 3316  
on livestock, in Austria 3316
- Simulium rheophilum***, taxonomy of,  
synonym of *S. argyreatum* 3315
- Simulium rostratum***, in USSR 1067
- Simulium ruficorne***, group of, in Morocco 2674
- Simulium sanctipauli***  
control of, insecticides for 2678  
enzymes in 3314  
gonotrophic cycle in 2975  
illustrations of 143  
in Ivory Coast 433, 1849, 2678, 2975  
in Upper Volta 147  
*Onchocerca volvulus* in, transmission of 147  
predators of, in Ivory Coast 1849  
seasonal size variation in 641  
taxonomy of, enzymes as characters for 3314  
temephos resistance in, in Ivory Coast 433, 2678
- Simulium sanguineum***  
feeding behaviour in 1269  
in Brazil 870, 1269  
on man, in Brazil 1269  
group of, *Mansonella ozzardi* in, development of 2156
- Simulium simplicicolor***  
feeding behaviour in 1269  
in Brazil 1269  
on man, in Brazil 1269
- Simulium sirbanum***  
control of, timing of 146  
development in 146  
enzymes in 3314  
gonotrophic cycle in 2975  
illustrations of 143  
in Ivory Coast 2975  
in Upper Volta 147  
*Onchocerca volvulus* in, transmission of 147  
seasonal size variation in 641
- Simulium sirbanum* contd.**  
taxonomy of, enzymes as characters for 3314
- Simulium soubrense***  
control of, insecticides for 2678  
enzymes in 3314  
gonotrophic cycle in 2975  
illustrations of 143  
in Ivory Coast 433, 1849, 2678, 2975  
in Upper Volta 147  
*Onchocerca volvulus* in, transmission of 147  
predators of, in Ivory Coast 1849  
seasonal size variation in 641  
taxonomy of, enzymes as characters for 3314  
temephos resistance in, in Ivory Coast 433, 2678
- Simulium spinibranchium***  
descriptions of 2155  
in Brazil 2155  
taxonomy of, lectotype for 2155
- Simulium squamosum***  
enzymes in 3314  
illustrations of 143  
taxonomy of, enzymes as characters for 3314
- Simulium subornatum***, taxonomy of,  
synonym of *S. argyreatum* 424
- Simulium tarnogradskii***  
in USSR 1023  
resting places of 1023
- Simulium tescorum***  
biology of 2664  
descriptions of 2664  
in USA 2664  
on man, in California 2664
- Simulium transiens***  
in USSR 1067  
Mermithidae in, in Transbaikalia 1067
- Simulium truncatum***  
in USSR 1067  
on man, in Transbaikalia 1067
- Simulium tuberosum***  
in Canada 3311  
in German Federal Republic 1268  
Microsporidia in, in German Federal Republic 1268
- Simulium variegatum***  
habitats of 1076  
in Morocco 2674  
in USSR 1076  
overwintering in 1076
- Simulium velistshevi***  
in USSR 1023  
resting places of 1023
- Simulium venustum***  
control of, repellents for, evaluating of 1856  
cytotypes of, limnological factors associated with 2666
- Dirofilaria ursi***, in development of 1296  
in Canada 1286, 3311  
in USA 2666  
on cattle  
in Alberta 1286  
in Manitoba 3311  
tarsi in, sensilla on 1578  
complex of  
feeding behaviour in 425  
on man, in Maine 425
- Simulium verecundum***  
control of, biological 2085  
cytotypes of, limnological factors associated with 2666  
development in  
effects of food supply on 2974  
effects of temperature on 2974  
in Canada 3311  
in USA 2666
- Neoapectana carpocapsae*** in,  
pathogenicity of 1858  
on horse, in Manitoba 3311  
on man, in Manitoba 3311
- Simulium virgatum***, in USA 2118
- Simulium vittatum***  
control of  
bioassay of larvicides for 2977  
biological 2397, 2976  
development in  
effects of food supply on 2974  
effects of temperature on 2974



***Simulium vittatum* contd.**

- fecundity in, effects of blood-feeding on 640
- feeding behaviour in 639
- effects of suspended particles on 2397
- host preferences in 639
- in Canada 1286, 3311
- in USA 3282
- Johnston's organ in 2153
- Neaplectana carpocapsae* in, pathogenicity of 1858
- on cattle, in Alberta 1286
- on horse, in Manitoba 3311
- on man, in Manitoba 3311
- on sheep, in Idaho 3282
- rearing of, techniques for 431

***Simulium vulgare***

- in USSR 1067
- Mermithidae in, in Transbaikalia 1067

***Simulium yahense***

- enzymes in 3314
- illustrations of 143
- in Ivory Coast 641
- in Upper Volta 147
- Onchocerca volvulus* in, transmission of 147
- taxonomy of, enzymes as characters for 3314

***simus*, *Rhipicephalus sinanoensis*, *Culicoides Sindbis virus***

- in *Aedes albopictus*
  - defective-interfering particles of 835
  - factor antagonistic to 1838
  - infectivity of 2639
  - interference in 2961
  - persistence of 2961
- Culex tritaeniorhynchus*, in Taiwan 2032
- man, in West Malaysia 1246
- research methods with 1471

***sinensis*, *Anopheles***

- sinensis*, *Megabothris*
- Singapore, *Pymotes ventricosus* in, on man 1657

**Sink holes, Culicidae in, in Missouri 3211*****sinkiangensis*, *Sergentomyia minuta******sinoculus*, *Pulex******sinuator*, *Arrenurus******Siphona stimulans* (see *Haematobosca stimulans*)*****Siphonaptera* 1479**

- adaptive modifications in 2307
- adaptive radiation in 2308
- bacteria in, in Kirghizia 1033
- combs in, functions of 2309
- conference 2305
- control of
  - for disease control 2315
  - insecticides for 2325
- evolution of 2311
- fables, folklore and fantasies concerning 2314
- feeding of, apparatus for 1185
- host skin penetration by 2327
- in Afghanistan 2029
- in Alaska 2330
- in Italy 2029
- in Michigan 2585
- in Mongolia 2583, 2870
- in Nigeria 2003
- in West Malaysia 2803
- in *Agelaius phoeniceus* nests, in Manitoba 864
- in bat dung, in Massachusetts 2582
- in poultry housing, in England 1717
- insecticide resistance in 2315
- interspecific associations of, statistical analysis of 2586
- male genitalia in, abnormalities in 2329
- marking of, dyes for 360
- mounting media for 1149
- olfactory system in, evolution of 3132
- on birds
  - in Kirghizia 1033
  - in New Zealand 2312
- on cat, transfer to man of 1417
- on dog, transfer to man of 1417
- on mammals
  - in Alaska 2584
  - in New Zealand 2312

***Siphonaptera* contd.**

- on man
    - disease transmission by 2316
    - in central Europe 820
  - on *Microtus brandti*, in Transbaikalia 1026
  - on *Microtus canicaudus*, in Oregon 2586
  - on *Neotomodon*, in Mexico 1458
  - on *Peromyscus maniculatus*, reinfestation by 2002
  - on rat, in Poland 50
  - on *Rattus norvegicus*, in Wisconsin 2304
  - on Rodentia
    - in Argentina 321
    - in Caucasus 2868
    - in Java 2819
    - in Maritime Territory 3389
  - on rodents
    - in Brazil 1751
    - in Burundi 49
  - on small mammals
    - in Maritime Territory 491
    - in Pyrenees 2340
    - in Scandinavia 2338, 2340
    - in Siberia 3184
  - on *Sylvilagus floridanus*
    - in Indiana 3145
    - in USA 1155
  - overwintering of, in birds' nests 2005
  - pathogens of, bibliography 2517
  - poem 2310
  - research on
    - in India 2337
    - in USSR 2318
  - Rickettsia mooseri* in, transmission of 2321
  - skeletal structures in 2332
  - zoogeography of 2311
- Siphonella neglecta*, taxonomy of, transferred to *Malloewia* 1832**
- SIR-6874 (see Benzamide, 2-chloro-N-[[[3,5-dichloro-4-(4-nitrophenoxy)phenyl]amino]carbonyl]-)**
- SIR-8514 (see Benzamide, 2-chloro-N-[[[4-(trifluoromethoxy)phenyl]amino]carbonyl]-)**
- sirbanum*, *Simulium***
- siro*, *Acarus***
- Siseca***
- habitats of 2811
  - in West Malaysia 2811
- Sisyphus*, in cattle dung, in Bulgaria 1385**
- Siteroptes queenslandicus***
- sp. nov., description of 1363
  - in Australia 1363
  - parasitising, *Stomoxys calcitrans*, in Queensland 1363
- Siteroptidae, in mammal nests, in USSR 1053**
- sitiens*, *Culex***
- Sitobion avenae*, control of, insecticides for 2507**
- Sitophilus granarius*, on man, hypersensitivity to 991**
- Skin diseases, parasitic, in man, caused by arthropods 1148**
- Skin tests**
- for diagnosing hypersensitivity to house-dust mites 1419
  - for diagnosing hypersensitivity to Hymenoptera stings 1389, 2455
- Skin ulcer, in man, caused by *Tunga penetrans* 2865**
- Slaughterhouses (see Abattoirs)**
- Sleeping sickness (see also *Trypanosoma brucei*)**
- control of 1587
  - vector control for 1332
  - foci of 1869
  - in Africa, review 1311
  - in Congo 1310, 2994
  - in Ivory Coast 1872
  - in Nigeria 1309, 1322
  - in Tanzania 1871
  - in Upper Volta 644
  - in West Africa 1869, 1873
  - in Zambia 1333
  - palaeoecology of 3006
- Sloth, Lepidoptera on, in Americas 1632**
- Sloth, three-toed (see *Bradypus tridactylus*)**
- Sloth, two-toed (see *Choloepus didactylus*)**
- Smartweed (see *Polygonum pennsylvanicum*)**

***Sminthopsis leucopus*, Guntheria**

- weedunnarti* on, in Northern Territory 1422

***smithii*, *Wyeomyia******Smittia***

- on *Rhododendron*, in Pennsylvania 3359
- sugar-feeding in 3359

***Smittium*, in, Culicidae, in Nebraska 2043*****Snail***

- parasitised by, Sciomyzidae, in Italy 9
- preyed on by fish 1543
- Sciomyzidae, in Italy 9

***Snake***

- Culex pipiens* on, in Honshu 2908
- Ornithodoros* spp. on, in Georgia (USSR) 3408

***Snares Islands (indexed under New Zealand Island Territories)******Sneezing*, in *Zalophus californianus*, caused by *Orthohalarachne diminuta* 1423*****Snowshoe hare virus*, in, *Aedes triseriatus*, transmission of, molecular basis of 2630*****Sodium***

- in *Aedes togoi* hemolymph, regulation of 857
- in *Amblyomma maculatum* 1644
- in *Calliphora vicina*, recycling in rectum of 2175
- in camel blood, effects of *Haematopinus tuberculatus* on 1175
- in *Nauphoeta cinerea* salivary glands, active transport of 333
- in rat salivary glands, *Tityus serrulatus* venom stimulating secretion of 2780
- in *Simulium* breeding water 2666

***Sodium chloride***

- in *Aedes* rearing water, effects on larval development of 3231
- in *Mesobuthus eupeus*, receptors for 3431
- in *Phormia regina*, effects of ziziphin on receptors for 1613

***Sodium fluosilicate* (see Silicate(2-), hexafluoro-, disodium)*****Soil***

- insecticides in
  - bioassay of 1455
  - residues of 1709
- Scarabaeidae in, effects of 3054

***Soil moisture*, *Aedes vexans* oviposition as affected by 3242*****Solanum tuberosum* (see Potato)*****Solar eclipse***

- effects of, on *Culex quinquefasciatus* 3223
- Wuchereria bancrofti* 3223

***Soldado virus***

- in *Ornithodoros capensis*, in West Africa 704
- O. maritimus* 2213
- sea birds, effects of 1947

***Solenodon cubanus*, *Cubanochirus maximus* on 1952*****Solenodon paradoxus*, *Cubanochirus* spp. on, in Dominican Republic 1952*****Solenopotes burmeisteri***

- in New Zealand 1172
- on *Cervus elaphus*, in New Zealand 1172

***Solenopotes capillatus***

- biology of 2853
- control of 2853
- in New Zealand 2290
- in USA 2853
- on cattle, in USA 2853

***Solenopotes ferrisi***

- in Canada 556
- on *Odocoileus*, in Alberta 556

***Solenopsis geminata***

- Burenella dimorpha* in infectivity of 3388
- transmission of 3388

***Solenopsis invicta***

- control of
  - biological 3384
  - hot water for 918
  - insecticides for 759, 2829
- head glands in 2206
- in Brazil 1627
- in USA 918, 1387, 1628, 2209, 2730, 3384

***Solenopsis invicta* contd.**

- intercastes in 1388
- mounds of, monitoring of distribution within 481
- nests of, mapping of 1387
- pathogens of, in Brazil 1627
- post-pharyngeal glands in, functions of 2203
- preying on
  - Amblyomma americanum*, in Louisiana 2209
  - Haematobia irritans*, in Louisiana 2209
- queen pheromone in, storage in poison sac of 3058
- range expansion of, model 2730
- rearing of
  - diets for 482
  - techniques for 2725
- soil characteristics and 1628
- venom of 1388

***Solenopsis richteri*, rearing of, techniques for 2725*****Solenopsis saevissima***

- in Brazil 1627
- pathogens of, in Brazil 1627

***sollicitans*, *Aedes***

- Solomon Islands, *Aedes albopictus* in 1550

**Somalia**

- Ixodoidea in 951
- Rhipicephalus pulchellus* in, viruses in 251

***sondaica*, *Neopysylla******sorbens*, *Musca******sordes*, *Tabanus laetinctus******sordida*, *Triatoma******Sorex***

- ectoparasites of, in Scandinavia 2338
- mites on, in Oregon 509

***Sorex araneus***

- Gamasoidea on, in USSR 1675
- Ixodes trianguliceps* on, in Ukraine 2736
- Palaeopsylla soricis* on, in Hungary 2027
- Siphonaptera on, in USSR 1049

***Sorex bendirii*, mites on, in Oregon 509*****Sorex cinereus*, *Ixodes marxi* on, in Canada 720*****Sorex minutus***

- Gamasoidea on, in USSR 1675
- Ixodes trianguliceps* on, in Ukraine 2736
- Sorex pacificus*, mites on, in Oregon 509
- Sorex trowbridgii*, mites on, in Oregon 509

***Sorghum* (Sorghum bicolor)**

- Sorghum* meal, in rodent baits containing acaricides 1412

***soricis*, *Palaeopsylla***

- Soriculus leucops*, Siphonaptera on, in Yunnan 568

***Soriculus nigrescens*, *Protomyobia***

- nepalensis* on, in Nepal 1004

***soubrense*, *Simulium*****South Africa**

- Amblyomma hebraeum* in
  - on cattle 945
  - rickettsiae in 945
- Boophilus* spp. in, on cattle 2224
- B. decoloratus* in
  - natural enemies of 2468
  - on cattle 948
- B. microplus* in
  - on cattle 948
- Culex theileri* in, viruses in 2139
- Culicidae in 84
- Culicoides* spp. in 84
- Culiseta longiareolata* in 2364
- Cydistomyia emergens* in, on man 2716
- Fucellia capensis* in, on *Ecklonia* 2439
- game animals in, pest control on 1888
- Ixodidae in, natural enemies of 1643
- Ixodoidea in, on cattle 1645
- Latoia vivida* in, on man 485
- medical entomology in 1248, 1478
- pesticide use in 1984
- Rhipicephalus appendiculatus* in, natural enemies of 2468
- Strobilostrus* spp. in, on cattle 1341
- Tabanus biguttatus* in 2716

**South Australia**

- medical entomology in 3037
- sheep in, fly control on 163
- veterinary entomology in 3037

**South Carolina**

- Culicidae in
  - in dredgings 2910
  - in salt marshes 2910

**South Dakota**

- Astigmata in, on small mammals 511
- Oeciacus vicarius* in, viruses in 1749

**South Korea, Culicidae in 2122****South-West Africa, *Loxosceles vonwredei* in 2257****Spain**

- Anopheles maculipennis* in, viruses in 2233
- Argasidae in 243
- Caparinia algirus* in, on *Aethechinus* 284
- Ceratopogonidae in, in tree holes 129
- Cervus elaphus* in, arthropod parasites of 1117
- Culicidae in 2941
- Damalinia ovis* in, on sheep 2850
- Dermacentor marginatus* in, viruses in 2233
- Haematopota csikii* in 17
- Ixodes ricinus* in, viruses in 2233
- Ixodidae in 243
- Ixodoidea in, on rabbit 2869
- Knemidokoptes mutans* in, on *Alectoris* 3419
- leishmaniasis in 3308
- Linguatula serrata* in, on goat 3117
- Mallophaga in, on birds 340
- Phlebotomus* spp. in 3308
- Rhipicephalus bursa* in, on cattle 3078
- Sciuropsis guevarai* in, on *Aethechinus* 284
- Scorpiones in, on man 1427
- Spilopsyllus cuniculi* in, on rabbit 2869
- Tabanidae in 451
- Tabanus darimonti* in 3368
- Thyreophagus gallegoi* in, in house dust 1971

***Spalangia*, parasitising, *Musca domestica*, in North Carolina 1345*****Spalangia cameroni***

- in USA 1345
- parasitising
  - Lucilia cuprina* 480
  - Musca domestica* 480
  - in North Carolina 1345

***Spalangia drosophilae* 1345*****Spalangia endius***

- in USA 1345
- parasitising
  - Lucilia cuprina* 480
  - Musca domestica* 480
  - and biological control using, in
    - Florida 367
    - in North Carolina 1345
  - Stomoxys calcitrans*
    - and biological control using in Florida 367
    - in Virgin Islands 1090

***Spalangia nigra***

- in USA 1345
- parasitising, *Musca domestica*, in North Carolina 1345

***Spalangia nigroaenea***

- in USA 1345
- parasitising, *Musca domestica*, in North Carolina 1345

***Sparganium*, *Simulium penobscotensis* associated with, in Maine 1848****Sparrow, Argasidae on, in Iran 2211****Sparrow, house (see *Passer domesticus*)*****spatzi*, *Leptotrombidium******spectabilis*, *Tabanus******Speleorodens clethrionomys***

- descriptions of 1656
- in Sweden 1656
- on golden hamster, in Sweden 1656

***Speotyto*, *Pulex irritans* on, in North America 2313*****Sperchon setiger***

- in USSR 1586
- parasitising, *Simulium* spp., in USSR 1586

***Sperchonopsis*, parasitising, *Simulium* spp., in USSR 1586*****Spermine* (see 1,4-Butanediamine, *N,N'*-bis(3-aminopropyl)-)*****Spermophilus lateralis***

- Colorado tick fever, virus in, in Colorado 1403, 3406

***Spermophilus lateralis* contd.**

- Dermacentor andersoni* on, in Colorado 1403, 3406
  - Spermophilus richardsonii*, Colorado tick fever, virus in, in Colorado 3406
  - Spermophilus tridecemlineatus*, *Thraxsis fatus* on, in Texas 1753
  - Sphaeridium*, in cattle dung, movement patterns of 3050
  - Sphaeridium bipustulatum*, biology of 1928
  - Sphaeridium lunatum*
    - attraction of, to cattle dung 225
    - biology of 1928
    - in Belgium 225
  - Sphaeridium scarabaeoides*
    - attraction of, to cattle dung 225
    - biology of 1928
    - in Belgium 225
    - in USA 3210
    - in pastures, effects of insecticides on 3210
  - Taenia saginata* in, transmission of 488
- Sphaeroceridae**
- in USSR 675
  - in cattle farms, in Bulgaria 902
  - preyed on by, *Scathophaga stercoraria*, in UK 1927
- Sphaerulariidae**, in insects, book 1134
- Sphecidae**, in British Isles 691
- sphegea**, *Sepedon*
- spickal**, *Geomydoecus*
- Spider** (see Araneae)
- Spilopsyllus cuniculi**
- in Australia 46, 2323
  - in France 2335
  - in Portugal 2336
  - in Spain 2869
  - in UK 2324
  - myxoma virus in, transmission of 2323, 2324
  - on *Oryctolagus cuniculus*
    - in France 2335
    - in Portugal 2336
    - in Spain 2869
  - on rabbit
    - in Australia 2323
    - in UK 2324
  - ovarian development in 2328
  - seasonal abundance of 2336
- Spinach** (*Spinacia oleracea*)
- Spinach** (cooked), naled in, uptake from air of 2266
- Spinacia oleracea** (see Spinach)
- spinibranchium**, *Simulium*
- spinifera**, *Prowichmannia*
- spiniger**, *Geotrupes*
- Spinolaelaps**
- on bat
    - in Moldavia 1077
    - in Uzbekistan 1071
- spinolai**, *Triatoma*
- spinasetosus**, *Herpetacarus*
- spinus**, *Culicoides*
- Spinturnicidae**, in Philippines 3416
- Spinturnix**
- in Philippines 3416
  - on bat, in Uzbekistan 1071
- spinulosa**, *Polyplax*
- Spirocerca lupi**, in, Scarabaeidae, in Egypt 3374
- Spirochaetales**
- in
    - Ornithodoros tartakovskyi*, in Kirgizia 1688
    - O. tholozani*, in Kirgizia 1688
- Spiro[11-oxabicyclo[8.1.0]undec-6-ene-2,2'-oxiran]-3-one, 8-methylene-5-(1-methylethyl)-**
- [1R-(1R\*,2R\*,5S\*,6E,10R\*)]-**
- attractant for, *Periplaneta americana* 3161
  - Periplaneta americana* sex pheromone 2553, 2554
- Spiroplasmataceae**, in, *Ixodes pacificus*, in Oregon 3081
- splendens**, *Toxorhynchites*
- Splendofilaria**
- taxonomy of
    - characters distinguishing *Chandlerella* and 1573
    - characters distinguishing *Eufilaria* and 1573



- Spodoptera eridania**, control of, insecticides for 2264
- Spodoptera frugiperda**  
in USA 2699  
traps for 2699
- Spodoptera littoralis**  
enzymes in 1448  
insecticide resistance in, monitoring of 1448
- Spodoptera litura**  
control of  
growth regulators for 1988  
insecticides for 2792
- Sporosarcina lutea**  
in  
*Argas persicus*, in Pakistan 247  
poultry, pathogenicity of 247
- Sporozoa** 1489, 1959, 3136
- Aegyptianella pullorum* 498
- Anaplasma* 1640, 2224, 2832, 3393
- A. marginale* 236, 937, 938, 943, 949, 950, 961, 2222, 2223, 2836, 2837, 3060, 3078, 3082
- Ascocystis armigeri* 1215
- A. culicis* 1215, 2590
- A. lanyuensis* 1215
- A. taiwanensis* 1215
- Babesia* 253, 940, 941, 943, 953, 965, 1109, 1721, 1938, 2259, 2476, 2756, 2832, 3137, 3393, 3396
- B. bigemina* 236, 245, 264, 937, 947, 948, 1069, 1394, 1943, 2221, 2224, 2538, 3060
- B. bovis* 236, 947, 948, 1640, 2221, 2224, 2538, 3060, 3088
- B. canis* 272
- B. colchica* 1069
- B. divergens* 277, 946, 1635, 2212, 3398
- B. equi* 3060
- B. major* 3398
- B. microti* 242, 971, 1651, 3397
- B. motasi* 1410, 1948, 2472
- B. ovis* 264, 3060, 3077
- Hammondia* 220
- Hepatozoon erhardovae* 2331
- Isoospora* 220
- Leucocytozoon* 2392
- L. tawaki* 142
- Mattesia geminata* 1627
- Plasmodium* 5, 76, 86, 142, 326, 405, 617, 624, 829, 850, 1154, 1202, 1778, 1779, 1780, 1781, 2054, 2080, 2122, 2127, 2259, 2285, 2372, 2373, 2380, 2801, 2880, 3194, 3195, 3217, 3222, 3277, 3284
- P. berghei* 90, 616, 1198, 1199, 3197
- P. cynomolgi* 680, 2058
- P. falciparum* 572, 618, 623, 843, 1549, 1767, 1776, 2058, 2128, 3198
- P. gallinaceum* 2624, 3196
- P. hermani* 837
- P. inui* 2070
- P. malariae* 2058
- P. simium* 576
- P. vivax* 623, 834, 843, 1041, 1552, 2058, 2128, 2896, 3198
- P. yoelii* 57, 90, 610, 824
- Sarcocystis* 220
- Stylocystis praecox* 679
- Theileria* 276, 943, 953, 2756, 3078
- T. annulata* 936, 944, 962, 3077
- T. bovis* 942
- T. lawrencei* 937, 942
- T. mutans* 499, 936, 942, 2474, 3060
- T. parva* 698, 936, 942, 1722, 1940, 2215, 2225, 3075, 3089
- T. sergenti* 936
- T. taurotragi* 709, 942
- T. velifera* 942, 3060
- Spotted-fever rickettsiae**  
in  
*Dermacentor andersoni*, in Montana 3065
- D. marginatus*, ultrastructure of 932
- D. variabilis*  
in New York 278  
in Ohio 234  
dog, in New York 278
- Hyalomma dromedarii*, ultrastructure of 932
- Ixodes ricinus*  
in Lithuania 3399  
sexual transmission of 2741
- Spotted-fever rickettsiae** *contd.*  
tick transmission of 3137
- Spray irrigation** (see Sprinkler irrigation)
- Sprays**  
effectiveness of  
effects of particle size on 1982  
effects of weather on 1982  
equipment for  
review 2271  
rotary sleeve nozzles, spray spectra characteristics of 2273  
techniques for, review 2271
- Springbok** (see *Antidorcas marsupialis*)
- Sprinkler irrigation**, with municipal sewage, effects on mosquitoes of 2368
- Spruce resin**  
in *Culex molestus*, inhibiting development 1011  
in quail, not affecting development 1011
- squamiger*, *Aedes*  
*squamipennis*, *Aedeomyia*  
*squamosa*, *Vespula*  
*squamosum*, *Simulium*  
*squamosus*, *Anopheles*
- Squirrel**  
*Haemaphysalis japonica* on, in Maritime Territory 2734
- Trypanosoma cruzi* in, in Mexico 352
- Sri Lanka**  
*Anopheles culicifacies* in 81, 2051  
*Culex quinquefasciatus* in 1206  
Culicidae in 840
- stabularis*, *Eulaelaps*
- Stachiella mustelae*  
in Poland 323  
on *Mustela*, in Poland 323
- stanfordi*, *Conorhinopsylla*
- Stannane**, (acetyloxy)triphenyl- (see Fentin acetate)
- Stannane**, chlorotriphenyl- (see Fentin chloride)
- Stannane**, hydroxytriphenyl- (see Fentin hydroxide)
- stantoni*, *Phlebotomus*
- Staphylinidae**  
in cattle dung, successions of 490  
in dung, in USSR 1057  
in poultry dung, in North Carolina 226  
preying on, *Musca domestica* 1057
- Staphylococcus albus**  
in  
*Blatta orientalis*, in UK 3157  
dog, associated with *Demodex canis* 2228  
*Rhyzopertha dominica* 1633
- starki*, *Palaeopsylla soricis*
- Statistical methods**  
estimation of infection rate from mixed sample sizes 831  
for analysing interspecific associations of ectoparasites of vertebrates 2586
- Statistics**, for biologists, book 2
- Stearic acid** (see Octadecanoic acid)
- Steatonyssus**  
on bat  
in Moldavia 1077  
in Uzbekistan 1071
- Steatonyssus occidentalis*, *Trypanosoma hedricki* in, not developing 2863
- Stegomyia**  
in Oriental region 575  
in tree holes, in Kenya 2876  
in water containers, in Nigeria 2895
- Stegopterna**  
control of, biological 3313  
in streams, in Newfoundland 3313  
maxillary sensilla in 3309
- Stegopterna mutata* (see *Cnephia mutata*)
- Steinernematidae*, in insects, book 1134
- stellifer*, *Culicoides*
- Stempellia*, in, Tabanidae, in USSR 1020
- Stempellia captschagaica*, in, *Aedes* spp., in Ukraine 1025
- Stenepteryx hirundinis* (see *Crataerina hirundinis*)
- Stenistomera*, taxonomy of 1750
- Stenolophus comma*, in USA 415
- Stenoponia tripectinata*, ovarian development in 2328
- Stenoponia tripectinata insperata*, in Morocco 3183
- stenopsis*, *Linognathus*  
*stenosinuata*, *Geusibia*
- Stenotabanus**  
autogeny in 2187  
on man, in Brazil 2187
- Stephanofilaria assamensis**  
in  
*Haematobia irritans*, not infective 1891  
*H. thirouxii*, in Uzbekistan 1891  
*Musca* spp., not infective 1891
- stephensi*, *Anopheles*  
*stercoraria*, *Scathophaga*
- Sterile-insect release**  
against  
*Anopheles albimanus* 846  
*Cochliomyia hominivorax* 456, 1919  
*Culex tarsalis* 2101  
model 2102  
Culicidae, review 3140  
*Glossina* spp. 1100, 1304  
*G. morsitans* 1089, 1098  
*G. palpalis* 873, 1088, 1323, 1324, 1699, 1875, 1884, 3004  
*Stomoxys calcitrans* 1090  
*S. nigra* 444  
model 1429
- sternalis**, *Paraperiglischrus*
- Sternostoma tracheacolum**  
control of  
acaricides for 1413  
fumigants for 1413  
descriptions of 1413  
in Belgium 1413  
in UK 2759  
on canary  
diagnosis of 1413  
in UK 2759
- Steroids**, hydroxy, in *Solenopsis invicta* post-pharyngeal glands 2203
- Sterols** (see Steroids, hydroxy)
- sticticus*, *Aedes*  
*sticticus*, *Aphodius*  
*stilobezzioides*, *Culicoides*  
*stimulans*, *Aedes*  
*stimulans*, *Haematobosca* (*Siphona*)  
*stimulans*, *Siphona* (see *Haematobosca stimulans*)
- stimulator*, *Cephenemyia*
- Stirofos** (see Tetrachlorvinphos)
- Stivalius**, taxonomy of 2306
- Stivalius cognatus**  
control of, insecticides for 565, 1190, 2819, 3188  
in Indonesia 565, 817, 1190, 2819, 3188  
malathion resistance in, in Java 565, 1190  
on *Rattus rattus*, in Java 3188  
on Rodentia, in Java 2819  
on small mammals, in Java 817
- Stivalius klossi*, taxonomy of, transferred to *Aviostivalius* 2306
- Stocking density**, of livestock, effects on ticks of 1722
- Stomorhina**, in New Caledonia 3339
- Stomorhina discolor**  
in New Caledonia 3339  
preying on, *Musca domestica*, in New Caledonia 3339
- Stomoxys**  
attractants for 1881  
repellents for 1881
- Stomoxys**  
control of 2525  
insecticides for 2820  
in South Africa 2139  
on cattle  
in Timor 2820  
in Wyoming 2525  
on zebu, in Malaysia 2538  
*Trypanosoma* spp. in, transmission of 1303  
wings in, morphometric characters of 1352
- Stomoxys calcitrans**  
autogeny in 2447  
breeding places of 904, 3352  
chromosomes in 450, 3370  
control of 199  
behaviour modification for 2447  
biological 367, 1090  
genetic 2447  
growth regulators for 656, 2438  
insecticides for 223, 2446, 3048  
sterile-insect release for 1090

***Stomoxys calcitrans* contd.**

- Dermatophilus congolensis* in, transmission of 777
- development in, effects of temperature on 1110
- diflubenzuron in
- effects on cuticle formation of 656
  - inhibition of DNA synthesis by 3367
  - not inhibiting chitin synthase 1901
  - persistence of 2438
- digestive enzymes in 2705, 3369
- effects of trypsin inhibitor on 2437
- enzymes in 1901, 2418, 3030, 3032
- feeding behaviour 1908
- glycerides in, incorporation of glucose into 3028
- hemolysins in 892
- in Australia 1363
  - in Brazil 1908
  - in Bulgaria 902
  - in France 223
  - in Mexico 1131
  - in UK 3048
  - in USA 367, 904, 2723, 3352
  - in Virgin Islands 1090
- in cattle farms
- in Bulgaria 902
  - in Florida 367
- in decomposing *Myriophyllum*, in North Carolina 2723
- in green fodders, in Florida 3352
- in silage, in Florida 3352
- insect growth regulators in
- bioassay for 452
  - not inhibiting chitin synthase 3032
- Malpighian tubules in, phosphate retention in, sex differences in 671
- moulting hormones in, activity pattern of 2418
- on cattle
- effects on milk production of 1131
  - in France 223
  - in UK 3048
  - increasing susceptibility to *Moraxella bovis* 2200
- on horse, in Brazil 1908
- oogenesis in 1612
- parasitised by, *Siteroptes queenslandicus*, in Queensland 1363
- pathogens of, bibliography 2517
- physiological age of, determining of 1610
- population age-structure in 1908
- reproductive system in 658
- sterilisation of,  $\gamma$ -irradiation for 1090
- Stomoxys nigra***
- biology of 224, 444
- control of
- biological 224
  - insecticides for 203, 224
  - sterile-insect release for 444
- development in, effects of temperature on 1110
- flight activity in, effects of  $\gamma$ -irradiation on 444
- in Mauritius 224, 444, 3036
- in sugar-cane plantations, sampling of 3036
- mating competitiveness in, effects of  $\gamma$ -irradiation on 444
- population density of, estimating of 3036
- seasonal abundance of 444
- sterilisation of,  $\gamma$ -irradiation for 444
- Stored products**, insect pests of, reservoirs of 776
- Stork, open-billed** (see *Anastomus oscitans*)
- Storm drains**
- Culex quinquefasciatus* in, in California 2113
  - mosquito control in, insect growth regulators for 2113
- stramineus, *Aedes***
- stramineus, *Eomenacanthus*** (see *Menacanthus stramineus*)
- stramineus, *Menacanthus*** (*Eomenacanthus*)
- Strandius**, in India 1629
- Stratiomyidae**
- Culicinomyces clavosporus* in, not pathogenic 1829
  - parasitised by, *Trichogramma* spp., in New York State 3373
  - pupae of 1348

**Streams**

- Bacillus thuringiensis* in, non-target effects of 1854
  - Culex johni* in, in Venezuela 579
  - Culicidae in, in Missouri 3211
  - Culicinae in, in Nigeria 602
  - Simuliidae in, in Poland 2391
  - Simulium vittatum* in, effects of suspended particles on 2397
- Streams, forest, *Anopheles saperoi*** in, in Ryukyu Islands 1217
- Streams, montane**
- Simulium* spp. in, in France 426
  - Tabanus cordiger* in, in German Federal Republic 469
- Streblidae**
- adaptive radiation in 2308
  - on bats, in Karnataka 2697
- Strelkovimermis peterseni*** in
- Anopheles punctipennis*, in New York State 1531
  - A. stephensi*, not infective 1531
  - Culex territans*, not infective 1531
- strenua, *Hylemya***
- Streptococcus faecalis*** in
- Blatta orientalis*, in UK 3157
  - Rhyzopertha dominica* 1633
- Streptococcus gallinarum*** in
- Argas persicus*, in Pakistan 247
  - poultry, pathogenicity of 247
- Streptomyces culudicus***, against, Culicidae, in rice-fields 1827
- Streptomycin**, in *Periplaneta americana*, reducing susceptibility to carbaryl 2505
- striata, *Euschoengastia*** (*Leptotrombidium*)
- striatulus, *Drepanocerus***
- striatum, *Leptotrombidium*** (see *Euschoengastia striata*)
- Strobiloestrus**
- on cattle, in South Africa 1341
  - taxonomy of 1338
- Strobiloestrus erikssoni***, taxonomy of 1338
- Strobiloestrus vanyli***
- descriptions of 1338
  - eggs of, attachment organ of 3333
  - in Zambia 1338
  - on *Kobus leche*, in Zambia 1338
  - taxonomy of 1338
- Strongyloidea**, in, pig, in German Federal Republic 1959
- Strongyloides***, in, pig, in German Federal Republic 1959
- Structural wood**, insecticides in, persistence of 2039
- Stubble burning**, Ixodidae as affected by 3411
- Sturnidae**
- arthropod parasites of, in Kirghizia 1033
  - bacteria in, in Kirghizia 1033
- Sturnus vulgaris***, *Ceratophyllus gallinae* on, in Scotland 2341
- stygia, *Calliphora***
- Stylocystis praecox*** in
- Conchapelopia melanops*, in Poland 679
  - Natarsia punctata*, in Poland 679
  - life history of 679
- Stylopyga rhombifolia*** (see *Neostylopyga rhombifolia*)
- styx, *Ceratophyllus***
- subakamushi, *Chiropetella*** (*Trombicula*)
- subakamushi, *Trombicula*** (see *Chiropetella subakamushi*)
- subalbatus, *Armigeres***
- subalpinus, *Anopheles melanoon***
- subangensis, *Radfordia***
- subansiriensis, *Onthophagus***
- subbadius, *Macrocheles***
- subcalifornicus, *Geomydoecus***
- subcylindrica, *Haematopota***
- subfasciipennis, *Culicoides***
- subgeomydis, *Geomydoecus geomydis***
- subimmaculatus, *Culicoides***
- subirrorata, *Haematopota***
- sublettel, *Procladius***
- submorsitans, *Glossina morsitans***
- subobscure, *Leptotrombidium***
- subochrea, *Culiseta***
- subornatum, *Simulium*** (see *S. argyreum*)

- subpictus, *Anopheles***
- subrostratus, *Felicola***
- subsimilis, *Tabanus***
- subtibbelesi, *Prosimulium*** (*Twinnia*)
- subtibbelesi, *Twinnia*** (see *Prosimulium subtibbelesi*)
- subtilis, *Pherbellia***
- Succinate dehydrogenase** (see Dehydrogenase, succinate)
- Succinea elegans***, parasitised by, Sciomyzidae, in France 1349
- Succinea putris***, parasitised by, *Pherbellia punctata* 2198
- Succinic acid** (see Butanedioic acid)
- Sucrose** (see  $\alpha$ -D-Glucopyranoside,  $\beta$ -D-fructofuranosyl)
- Suctarsonemus***, on cattle, in Mexico 1462
- Sudan**
- bluetongue in 1520
  - Cladotanytarsus lewisi* in 2192
  - on man 1596
  - Culicoides kingi* in, nematodes in 1841
  - Demodex canis* in, on dog 3418
  - Hemiptera in 2016
  - leishmaniasis in 634
  - Phlebotominae in 634
  - Simulium griseicollae* in, nematodes in 1841
- Sugar-cane** (*Saccharum officinarum*)
- Sugar-cane plantations, *Stomoxys nigra*** in, sampling of 3036
- Sugar-cane products**, chlorpyrifos in, residues of 1802
- Sugar-cane straw**, insecticides on, persistence of 203
- Sugars**
- bait component for
  - Cochliomyia hominivorax* 1132, 2169
  - Musca domestica* 3017
  - in *Dermacentor andersoni*, developmental changes in 1400
  - in *Sarcophaga argyrostoma* diet, required for ovarian development 476
- Suidasia medanensis*** (see *S. pontifica*)
- Suidasia pontifica***
- in Mexico 1462
  - on cattle, in Mexico 1462
- suilla, *Scathophaga***
- suis, *Haematopinus***
- suis, *Sarcoptes*** (see *S. scabiei*)
- suis, *Sarcoptes scabiei*** (see *S. scabiei*)
- sulcata, *Haemaphysalis***
- sulcifrons, *Tabanus***
- Sulfadoxine** (4-amino-N-(5,6-dimethoxy-4-pyrimidinyl)benzenesulfonamide)
- in *Anopheles stephensi*, effects on *Plasmodium berghei* of 90
- Sulfaphenazole** (4-amino-N-(1-phenyl-1H-pyrazol-5-yl)benzenesulfonamide)
- in *Glossina palpalis*, effects on reproductive system of 2684
- Sulfate**, in *Simulium* breeding water 2666
- Sulfidophos** (see Fenthion)
- Sulfur**, in *Anopheles fluviatilis*, relation of DDT resistance and 2926
- Sulfuric acid**, disodium salt, for inducing egg-hatch in *Aedes sierrensis* 3245
- Sumifly** (see Fenvalerate)
- Sumithion** (see Fenitrothion)
- Sumithrin** (see Phenothrin, (1R-cis,trans)-)
- summosus, *Culex tritaeniorhynchus*** (see *C. tritaeniorhynchus*)
- Suncus murinus**
- Hoplopleuridae on, in Burma 1496
  - Leptotrombidium arenicola* on, in Indonesia 2810
  - Mesostigmata on, in Burma 2775
  - Siphonaptera on, in Java 817, 2819
- sundaicus, *Anopheles***
- sundewalli, *Elgiva***
- Sunfish, bluegill** (see *Lepomis macrochirus*)
- Supella longipalpa***
- biology of 788
  - control of
  - biological 1737
  - insecticides for 788, 1737
  - traps for 1737
  - in Turkey 788
  - in USA 1737
  - parasitised by
  - Comperia merceti* 555
  - in California 1737
- superpictus, *Anopheles***



**Suriname**

- Mitonyssus* spp. in, on bats 2238  
*Ophthalmodex* spp. in, on bat 1002  
*O. artibeii* in, on *Artibeus* 735  
*Psorergatoides* spp. in, on bats 736  
*Pterodex carolliae* in, on *Carollia* 1001  
*Tunga penetrans* in, on man 2865

**surinamensis, Psorergatoides**

- Surra, in Philippines 2804  
*Sus scrofa domestica* (see Pig)  
 Suslik, European (see *Citellus citellus*)  
 Swallow, bank (see *Riparia riparia*)  
 Swallow, cliff (see *Petrochelidon pyrrhonota*)

**Swamps**

- Anopheles subpictus* in, in Indonesia 1777  
 endsulfan in, non-target effects of 2163  
 Sweating sickness, in cattle, caused by  
*Hyalomma truncatum* 246

**Sweden**

- Bezzia* spp. in, natural enemies of 2653  
*Rhipicephalus sanguineus* in, on dog 3400  
*Sarcoptes scabiei* in  
 on man 1673  
 on pig 1661  
*Speleorodens clethrionomys* in, on golden hamster 1656

- Sweep net, formula for volume sampled by 1456

**Swine (see Pig)****Switzerland**

- Cheyletus tenuipilis* in, in house dust 300  
 Culicidae in 3215  
*Lucilia sericata* in, on sheep 471  
*Lycotocoris campestris* in, on man 564  
*Pediculus capitis* in, on man 1174  
*P. humanus* in, on man 1174  
*Pthirus pubis* in, on man 1174  
*Sarcoptes scabiei* in, on pig 999

**Swormlure-2**

- attractant for  
*Cochliomyia hominivorax* 1132, 2429  
*C. macellaria* 2429  
 bait component for, *Cochliomyia hominivorax* 2169  
*Cochliomyia hominivorax* responses to 1896

**swynnertoni, Glossina**

- Sycoracinae, in Colombia 2661

**Sycorax**

- in Colombia 2661

**taxonomy of 2661****syvestris, Cricotopus**

- syliarum*, *Liponyssus* (see *Ornithonyssus syliarum*)

**syliarum, Ornithonyssus (Liponyssus)**

- Sylvicapra grimmia*, *Ixodes donarthuri* on, in Mozambique 1404

**sylvicola, Diglochis****Sylvilagus**

- Cediopsylla* spp. on 2335

- Odontopsyllus* spp. on 2335

**Sylvilagus floridanus**

- arthropod parasites of, in USA 1155  
 Connecticut virus in, antibodies to 1408  
 ectoparasites of, in Indiana 3145  
*Haemaphysalis leporispalustris* on, resistance to 492

- Ixodes dentatus* on, in Connecticut 1408

- Linguatula serrata* on, in USA 1679

- Rickettsia rickettsii* in, infectivity of 966

- Sylvilagus nuttalli*, *Rickettsia rickettsii* in, infectivity of 966

**Symphyta, taxonomy of, types in Cornell**

- University collection 3387

**Syncerus caffer (see Buffalo, African)****synnomus, Laelaps**

- Synthase, chitin (see Acetylglucosaminyltransferase, chitin-uridine diphosphate)

**Synthetase, methenyltetrahydrofolate, in**

- Aedes aegypti*, properties of 838

**Syria**

- Anopheles sacharovi* in 2127

- A. stephensi* in 2127

- malaria in 2127

**Syringa vulgaris (see Lilac)****Syrphidae**

- Culicinymphe clavosporus* in, pathogenicity of 1829  
 fenethacarb in, toxicity of 1530  
 in Azerbaijan 899

**tabani, Telenomus****Tabanidae**

- activity in 3034  
 attractants for 1881  
 blood-feeding in 1358  
 effects on life-span of 1921  
*Coelomomyces milkoii* in, development of infection with 1065  
 control of 2525  
 insecticides for 223  
*Culicinymphe clavosporus* in, not pathogenic 1829  
*Dermatophilus congolensis* in, transmission of 777  
 fungi in, in USSR 3336  
 hosts of, visual selection of 1376  
 in Belgium 449  
 in California 2444  
 in Czechoslovakia 189  
 in Luxembourg 449  
 in Nearctic region, book 2587  
 in Netherlands 449  
 in Nigeria 2003  
 in Norway 1907  
 in Philippines 2804  
 in Portugal 451  
 in South Africa 2139  
 in Soviet Far East 3348  
 in Spain 451  
 in Tajikistan 205, 1616  
 in Tennessee 661  
 in Ukraine 1024, 1079  
 in USSR 2692  
 in Uzbekistan 1070  
 in West Malaysia 2808  
 Microsporidia in, in USSR 1020  
 nectar-feeding in 1358  
 on cattle  
 effects on productivity of 1521  
 in Alberta 1287  
 in France 223  
 in German Federal Republic 465  
 in Wyoming 2525  
 on horse  
 defensive activity against 3034  
 effects of host group size on 2185  
 in France 3034  
 on livestock, in Ukraine 1078  
 parasitised by, *Trichogramma* spp., in New York State 3373  
 pathogens of  
 bibliography 2517  
 in USSR 3040  
 physiological age of, determining of 2874  
 preyed on by  
*Bembix* spp., in Tajikistan 1617, 3347  
*Vespula germanica*, in Tajikistan 3347  
 pupae of 1348  
 reservoir construction as affecting 2694  
 sugar-feeding in, effects on life-span of 1921  
 thorax in 3042  
*Trypanosoma* spp. in, transmission of 1303  
*T. brucei* in, transmission of 644  
*T. evansi* in, transmission of 184

**Tabaninae**

- in West Palaearctic region 3340

**taxonomy of 3340****tabanivora, Trichopria****Tabanomyces milkoii**

- in  
*Chrysops relictus*, in Ukraine 3336

**Tabanus autumnalis**

- in Ukraine 3336

- in Uzbekistan 3336

- T. golovi*, in Uzbekistan 3336

**Tabanus**

- feeding behaviour in 2443

- hosts of, visual selection of 1376

- in Norway 1907

- in Soviet Far East 3348

- in USSR 2692, 3040

- in Uzbekistan 1070

- in decomposing *Myriophyllum*, in North Carolina 2723

- in hardwood forests, in Louisiana 2440

- on cattle, in Connecticut 2443

- on zebu, in Malaysia 2538

- Pasteurella tularensis* in, transmission of 1380

**Tabanus abactor**

- blood-meals in 1899

**Tabanus abactor contd.**

- daily activity in 3015  
 in USA 1899, 3015  
 on cattle, distribution pattern of 1899

- Tabanus abdominalis*, taxonomy of, characters distinguishing *T. sulcifrons* and 1922

**Tabanus aranti**

- in USA 1597  
 taxonomy of, misidentified as *T. nigrescens atripennis*, in Florida 1597

**Tabanus argenteomaculatus**

- in USSR 205  
 on cattle, in Tadzhikistan 205

**Tabanus atratus**

- blood-meals in 1899  
 daily activity in 3015  
 in USA 1899, 1906, 3015  
 in salt marshes, in Massachusetts 1906  
 on cattle, distribution pattern of 1899

**Tabanus autumnalis**

- feeding behaviour in 1078  
 in USSR 1020, 1078, 2694, 2695, 3336  
 Microsporidia in, development of infection with 1020  
 on livestock, in Ukraine 1078  
*Pheromermis tabani* in, in Crimea 2695  
*P. vernalis* in, in Crimea 2695  
*Tabanomyces milkoii* in, in Ukraine 3336

**Tabanus autumnalis brunescens**

- biology of 1604  
*Coelomomyces milkoii* in, in Uzbekistan 445

- in USSR 445, 1604, 3336

- Metarhizium anisopliae* in, development of infection with 1065  
 in Uzbekistan 445

- Paezilomyces varioti* in, in Uzbekistan 3336

- Tabanomyces milkoii* in, in Uzbekistan 3336

**Tabanus bifarius, group of, key 3340****Tabanus biguttatus**

- in South Africa 2716  
 preying on, *Tipula pomposa*, in South Africa 2716

**Tabanus bovinus**

- feeding behaviour in 1078  
 in France 223  
 in USSR 1078, 2694  
 on cattle, in France 223  
 on livestock, in Ukraine 1078

**Tabanus bromius**

- activity in 2409  
 control of, repellents for 3230  
 diurnal activity in 189  
 feeding behaviour in 1078  
 in Czechoslovakia 189, 3230  
 in USSR 156, 1078, 2409, 2693, 2694  
*Neoplectana tabanivora* in, in Ukraine 2693

- on cattle, in Czechoslovakia 3230

- on livestock, in Ukraine 1078

- parasitised by, *Diglochis terteriani*, in Armenia 156

- seasonal abundance of 189

**Tabanus cordiger**

- descriptions of 469  
 habitats of 469  
 in German Federal Republic 469

**Tabanus darimonti**

- distribution of 3368

- in France 3368

**Tabanus equalis**

- blood-meals in 1899  
 daily activity in 3015  
 in USA 1899, 3015  
 on cattle, distribution pattern of 1899

**Tabanus fuscicostatus**

- flight activity in 2440  
 in USA 2440  
 in hardwood forests, in Louisiana 2440

- Tabanus gladiator*, taxonomy of, characters distinguishing *T. sulcifrons* and 1922

**Tabanus golovi**

- in USSR 3336  
*Tabanomyces milkoii* in, in Uzbekistan 3336

**Tabanus golovi pallidus**

- biology of 1604  
 in USSR 1604

**Tabanus hissaricus**

- in USSR 205

- Tabanus hissaricus* contd.  
on man, in Tadzhikistan 205
- Tabanus humilis*, in Japan 1373
- Tabanus hyugaensis*, in Japan 1373
- Tabanus iyoensis*  
group of  
in Japan 1373  
medical importance of 1373
- Tabanus kotoshoensis*, in Japan 1373
- Tabanus laetinctus sordes*  
in USSR 205  
on cattle, in Tadzhikistan 205  
on man, in Tadzhikistan 205
- Tabanus lineola*  
abdominal musculature in 2181  
control of, traps for 1906  
flight activity in 2440  
in USA 1906, 2440  
in hardwood forests, in Louisiana 2440  
in salt marshes, in Massachusetts 1906  
population dynamics of 1906  
traps for 1906
- Tabanus maculicornis*  
control of, repellents for 3230  
in Czechoslovakia 3230  
on cattle, in Czechoslovakia 3230
- Tabanus masamitsui*, in Japan 1373
- Tabanus miki*, in USSR 2694
- Tabanus mularis*  
blood-meals in 1899  
daily activity in 3015  
in USA 1899, 3015  
on cattle, distribution pattern of 1899
- Tabanus nefarius*, taxonomy of, characters distinguishing *T. sulcifrons* and 1922
- Tabanus nigrescens atripennis*, taxonomy of,  
*Tabanus aranti* misidentified as, in  
Florida 1597
- Tabanus nigrovittatus*  
blood-feeding in 185  
control of, traps for 1906  
in Canada 2197  
in USA 1603, 1906  
in salt marshes, in Massachusetts 1906  
oogenesis in 185  
oviposition in 185  
parasitised by, *Trichopria* spp., in  
Connecticut 1603  
physiological age of, estimating of 185  
population dynamics of 1906  
traps for 1906
- Tabanus otsurui*, in Japan 1373
- Tabanus proximus*  
oviduct in  
effects of proctolin on 3341  
effects of serotonin on 3341
- Tabanus pungens*  
distribution of 1597  
in USA 1597
- Tabanus quinquevittatus*  
in USA 661  
in damp pastures, in Tennessee 661
- Tabanus regularis*  
in France 223  
on cattle, in France 223
- Tabanus reinwardtii*, in Canada 2197
- Tabanus rupium*  
descriptions of 217  
in France 217, 659  
parasitised by, *Scelionidae*, in France 659
- Tabanus sapporoensis*, in Japan 1373
- Tabanus schiva*  
in USSR 205  
on cattle, in Tadzhikistan 205  
on man, in Tadzhikistan 205
- Tabanus spectabilis*  
in USSR 205  
on cattle, in Tadzhikistan 205
- Tabanus subsimilis*  
blood-meals in 1899  
daily activity in 3015  
in USA 1899, 3015  
on cattle, distribution pattern of 1899
- Tabanus sulcifrons*  
blood-meals in 1899  
daily activity in 3015  
descriptions of 1922  
in USA 1899, 3015  
on cattle, distribution pattern of 1899  
oviduct in 3341  
taxonomy of, lectotype for 1922
- Tabanus trimaculatus*  
daily activity in 3015  
in USA 3015
- tabu, Aedes tongae*
- Tacaluma viruses*, antigenic relationships  
among 2949
- Tachinidae*, parasitised by, *Dirhinus* spp., in  
Indian subregion 3056
- tachinoides, Glossina*
- Tachycardia*, in guinea-pig, caused by  
*Leiurus quinquestriatus* venom 309
- Tadarida condylura*  
*Notoedres ovatus* on, in Uganda 283  
*N. tadaridae* on, in Uganda 283
- Tadarida pumila*  
*Aracopsylla faini* on, in Rwanda 3181  
*Notoedres tadaridae* on, in Uganda 283
- tadaridae, Notoedres*
- Taenia saginata*  
eggs of, insect dispersal of 123  
in  
*Aphodius fimetarius*, transmission of 488  
*A. fossor*, transmission of 488  
*Sphaeridium scarabaeoides*, transmission of 488
- Taeniarhynchus saginatus* (see *Taenia saginata*)
- taeniopus, Culex*
- taeniorhynchus, Aedes*
- Tagetes erecta*, insecticidal activity of  
extracts of 3127
- Tagetes patula*, insecticidal activity of  
extracts of 3127
- Ťahyňa virus*  
foci of 1560  
in  
*Aedes caspius*, in Czechoslovakia 1560  
*A. vexans*, in Czechoslovakia 1560  
*Culicidae*, transmission of 3215
- Taiwan  
*Aedes aegypti* in, natural enemies of 1215  
*A. albopictus* in, natural enemies of 1215  
*A. alcasidi* in, natural enemies of 1215  
*Anopheles takasagoensis* in, on man 2070  
*Armigeres subalbatus* in, natural enemies of 1215  
*Culex quinquefasciatus* in, viruses in 2032  
*C. tritaeniorhynchus* in, viruses in 2032  
*C. vishnui* in, viruses in 2032  
*Culicidae* in 2349  
natural enemies of 2031  
*Periplaneta americana* in 3161
- taiwana, Forcipomyia*
- takasagoensis, Anopheles*
- Taktic* (see *Amitraz*)
- Talpa europaea, Eadicia brevipalmata* on 2236
- talpae, Dubininetta (Lynxacarus)*
- talpae, Hirstionyssus*
- talpae, Hystrichopsylla*
- talpae, Lynxacarus* (see *Dubininetta talpae*)
- talpae, Tarsonemus*
- Tamias striatus*  
*Apodantopus sciuricola* on, in Rhode Island 922  
*Haemaphysalis leporispalustris* on, in Canada 720  
*Ixodes dammini* on, in Connecticut 248
- Tamiasciurus douglasii, Chatia cunningghamiae* on, in Washington State 3095
- Tamiopsochirus*, taxonomy of, synonym of *Metalistrophorus* 2770
- Tamiopsochirus lukoschusi*, taxonomy of, transferred to *Pteromychirus* 2770
- Tanyderidae*, palpal sensilla in 3309
- Tanypodinae*  
emergence in 1905  
in Florida 1905  
parasitised by, *Arrenurus* spp., in West Germany 468
- Tanypus*, in California 670
- Tanypus grodhausi*  
control of, insecticides for 3346  
in USA 3346  
in flood-control channels, in California 3346
- Tanytarsus*  
control of  
growth regulators for 1366, 2412  
insecticides for 2413  
emergence in 1905  
in Florida 1366, 1905  
in flood-control systems, in California 2413  
in rice-fields, effects of fertilizers on 1624
- Tanzania  
*Amblyomma lepidum* in 703  
*A. variegatum* in 703  
*Anopheles gambiae* in, on man 1836  
*A. merus* in, on man 1836  
*Chrysomya chloropyga* in, in latrines 2928  
*Culex quinquefasciatus* in 2366  
in latrines 2928  
Diptera in, in zoological gardens 3189  
*Glossina morsitans* in 762, 2679  
*G. pallidipes* in 2679  
*G. swynnertoni* in 1328  
*Ixodoidea* in 951  
malaria in 3195  
*Paederus sabaeus* in, on man 3049  
Siphonaptera in, on rodents 2030  
sleeping sickness in 1871
- Tapeworm (see *Cestoda*)
- tarandi, Oedemagena*
- tarnogradskii, Simulium*
- Taro (see *Colocasia*)
- tarsalis, Culex*
- Tarsonemidae*, in mammal nests, in USSR 1053
- Tarsonemina*, in house dust, in Denmark 287
- Tarsonemus*, in house dust 1479
- Tarsonemus floricolus*  
in Denmark 287  
in house dust, in Denmark 287
- Tarsonemus talpae*, in USSR 1053
- Tarsopsylla octodecimdentata coloradensis*  
in USA (Alaska) 1187  
on *Perisoreus canadensis*, in Alaska 1187
- tartakovskiy, Alectorobius* (see *Ornithodoros tartakovskiy*)
- tartakovskiy, Ornithodoros (Alectorobius)*
- tartara, Shelfordella*
- taschenbergi, Leptopsylla*
- Tasmania  
arthropod pests in 533, 1720  
sheep in, fly control on 163
- Tatera indica, Listrophoroides pakistanicus*  
on, in Pakistan 2772
- Tatera nigricauda, Xenopsylla* spp. on, in  
Kenya 1513
- Taurine* (see *Ethanesulfonic acid, 2-amino-*)
- taurus, Onthophagus*
- Taxonomy, role in applied entomology of 2268
- taylori, Aedes*
- taylori, Schoengastia*
- Teak plantations  
*Aedes aegypti* in, in Nigeria 1194  
*A. africanus* in, in Nigeria 1194
- Techniques  
automated assay for acetylcholinesterase 1448  
bioassay of pesticides, review 1455  
fluorometric analysis of ecdysteroids 753  
for analysing dimethylalkanes in insect cuticular wax 2277  
for assessing mating in *Musca domestica* 754  
for blood-feeding of insects 3249  
for clearing and mounting mites 1064  
for collecting venom from spiders 523  
for counting microfilariae ingested by mosquitoes 2909  
for cultivating insect cell lines in roller bottles 1997  
for detecting *Babesia* in ticks 1109  
for detecting *Trypanosoma* in *Glossina* 1312  
for detecting trypanosomes in vectors 813  
for determining esterase in *Culicidae* 3281  
for determining insecticide susceptibility of *Culicidae* 2645, 3219, 3220  
for determining insecticide susceptibility of *Simuliidae* 2675



**Techniques** *contd.*

- for determining low levels of pesticides, conference 2260
- for determining physiological age of blood-sucking Diptera 2874
- for determining susceptibility of Culicidae to insect growth regulators 2890
- for estimating mites in house dust 1956
- for evaluating control agents for Simuliidae 2396
- for evaluating systemic acaricides against ticks 974
- for identifying *Glossina* blood-meals 3322
- for identifying mite blood-meals 1954
- for isolating arboviruses in mosquito cell lines 2950
- for isolating pigment granules from insect eyes 2448
- for measuring heat production by active insects 1027
- for measuring ingestion of bacteria by mosquito larvae 2892
- for measuring insect flight parameters 2423
- for measuring size of mosquito blood-meals 2909
- for measuring toxicity of insecticides in baits 528
- for preparing *Beauveria* for SEM 1687
- for preparing mites for SEM 2768
- for relaxing insects 2515
- for remounting mite preparations 2485
- for screening chitin synthesis inhibitors 452
- for screening potential insecticides 1682
- for staining smears of insect hemolymph 2513
- for standardising allergen preparations 3106, 3107
- for stimulating pheromone release by insects 2270
- for visualising lipids in electron microscopy 2861
- indicator activation method for marking *Glossina* 2681
- tecomanus, *Centruroides limpidus***
- Telenomus**, parasitising, Tabanidae, in New York State 3373
- Telenomus fariai**
  - in Bolivia 1474
  - in Brazil 42
  - parasitising
    - Triatoma infestans*, in Bolivia 1474
    - T. sordida*, in Bolivia 1474
    - Triatominae, in Brazil 42
- Telenomus kurentzovi**
  - in USSR 2178
  - variability in 2178
- Telenomus oophagus**
  - in USSR 2178
  - variability in 2178
- Telenomus tabani**
  - in USSR 2178
  - variability in 2178
- Temephos** (*O,O'*-(thiodi-4,1-phenylene) bis(*O,O*-dimethyl phosphorothioate)) against
  - Aedes* spp. 1822
  - A. aegypti* 115
  - A. vexans* 2040
  - Anopheles* spp. 3194, 3200, 3267
  - A. culicifacies* 3218
  - A. sacharovi* 76
  - Chironomidae 3346
  - Chironomus* spp., in flood-control systems 2413
  - Ctenocephalides felis*, on dog 2028
  - Culex pipiens* 772, 1822, 2040
  - C. quinquefasciatus* 608, 2353, 3269
    - in pig waste 374
    - in storm drains 2113
  - C. restuans* 1822
  - Culicidae 1709, 3209
  - Culicoides molestus* 3302
  - C. occidentalis* 2385
  - Mansonia annulifera* 2057
  - M. uniformis* 2057
  - Simulium* spp. 1704, 2672
  - S. incrustatum*, in rivers 3317
  - Tanytarsus* spp., in flood-control systems 2413
- in fish, residues of 1691

**Temephos** *contd.*

- in flea collars 2028
- in rivers, non-target effects of 1691
- resistance to, in
  - Anopheles albimanus*, in El Salvador 1816
  - Culex pipiens* 2604
    - in Italy 772
  - C. quinquefasciatus* 1221
    - development and loss of 2110
    - genetics of 2104
    - in Uttar Pradesh 608
    - mechanisms of 2104
  - Procladius* spp., in California 2413
  - Simulium sanctipauli*, in Ivory Coast 433, 2678
  - S. soubrense*, in Ivory Coast 433, 2678
- Temperature**, blood-feeding insects as affected by 2283
- Tenebrio**, tracheoles in 2835
- Tenebrio molitor**
  - enzymes in 2795
  - Hymenolepis diminuta* in
    - effects of temperature on 1390
    - effects on water balance of 1390
  - in USA 2582
  - in bat dung, in Massachusetts 2582
- Tenebrionidae**, helminths in, in Uzbekistan 316
- tenebrosus, *Anopheles***
- tengchongensis, *Herpetacarus***
- Tennessee**
  - Anoplura in, on *Sciurus* 1189
  - Culex* spp. in 2074, 2944
  - C. pipiens* in 2914
  - C. quinquefasciatus* in 2914
  - Nearctopsylla pfitzeri* in, on *Blarina* 2867
  - Orchopeas howardii* in, on *Sciurus* 1189
  - Tabanidae in 661
- tenorioae, *Ophthalmognathus***
- tenuipilis, *Cheyletus***
- Tenutex** (see DDT, with disulfiram, and phenylmethyl benzoate)
- teongwahi, *Whartonia***
- Tepa** (1,1',1"-phosphinylidynetris[aziridine]) vapour pressure of 2272
- Tephritidae**, parasitised by, *Dirhinus* spp., in Indian subregion 3056
- teres, *Ctenophthalmus***
- Termeil virus**, in, Culicidae, in New South Wales 2033
- terraenovae, *Phormia* (Protophormia)**
- terraenovae, *Protophormia*** (see *Phormia terraenovae*)
- Terramycin** (see Oxytetracycline)
- territans, *Culex***
- terteriani, *Diglochis***
- tescorum, *Simulium***
- tesquorum, *Ceratophyllus*** (see *Citellophilus tesquorum*)
- tesquorum, *Citellophilus* (*Ceratophyllus*)**
- tessellatus, *Anopheles***
- Tetanocera**, parasitised by, *Trichogramma* spp., in New York State 3373
- Tetrachlorvinphos** ((*Z*)-2-chloro-1-(2,4,5-trichlorophenyl)ethenyl dimethyl phosphate) against
  - Glossina swynnertoni* 1328
  - Haematobia irritans*, on cattle 1367, 1915, 3010
  - Musca autumnalis*, on cattle 1915
  - M. domestica* 773
  - Ornithonyssus sylviarum*, on fowl 1953
  - in building materials, persistence of 773
  - in cattle
    - excretion of 1451
    - metabolism of 1451
  - in cattle ear tags 1367, 3010
  - resistance to, in
    - Musca domestica* 1347
    - development of 1893
- Tetracycline**, in *Periplaneta americana*, reducing susceptibility to carbaryl 2505
- Tetradecanamide, *N,N*-dimethyl-** against
  - Culex quinquefasciatus* 2107
  - Psoroptes* spp. 998
  - formulations of, emulsifiable concentrates 2107
- Tetradonematidae**, in, insects, book 1134

- Tetrahymena**, in, *Simulium* spp., in Ivory Coast 429
- Tetramethrin** ((1,3,4,5,6,7-hexahydro-1,3-dioxo-2*H*-isoindol-2-yl)methyl 2,2-dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylate) against
  - Culex molestus* 401
  - C. pipiens* 2604
  - Musca domestica* 1893
  - Panstrongylus megistus* 1507
  - Rhipicephalus sanguineus*, in dwellings 965
  - on walls, persistence of 401
  - with piperonyl butoxide, antagonistic 1507
  - (1*R*-*cis*)-, in *Periplaneta americana*, neurotoxicity of 3435
  - (1*RS*-*trans*)-, in *Musca domestica*, poisoning by 207
  - (1*R*-*trans*)-, in *Periplaneta americana*, neurotoxicity of 3435
- Tetranychidae**, predation of, model 1369
- Tetrastes bonasia, *Haemaphysalis japonica*** on, in Maritime Territory 2734
- Tetrastichus hagenowii**
  - antennae in, sensilla on 3159
- Blattella germanica** not parasitised by 2550
- host specificity in 2550
- mating in 334, 1739
- oviposition in 334, 1739
- parasitising
  - Blatta orientalis* 2550
  - Periplaneta americana* 334, 1739, 2550
- tetratoma, *Trichopria*** (see *T. oxygaster*)
- texanus, *Geomylichus***
- texanus, *Ixodes***
- Texas**
  - Aedes aegypti* in 2133
  - cattle dung in, control of 1932
  - Cochliomyia hominivorax* in 1919, 2169
  - Culex quinquefasciatus* in 2913
  - Demodex cati* in, on zoo *Uncia uncia* 2234
  - D. zalophi* in, on zoo *Zalophus californianus* 2228
  - Geomydoecus* spp. in, on *Thomomys* 1171
  - G. guadalupensis* in, on *Thomomys* 2849
  - G. heaneyi* in, on *Geomys* 33
  - Haematobia irritans* in, on cattle 3010
  - Hybomitra lasiophthalma* in 906, 2431
  - natural enemies of 907, 2167
  - Hypoderma lineatum* in, on cattle 441
  - Psorophora columbiae* in, in rice-fields 375
  - Psoroptes ovis* in, on cattle 3427
  - Solenopsis invicta* in 1628, 2730
  - Tabanus pungens* in 1597
  - Thraiss fatus* in, on *Spermophilus* 1753
  - Triatoma gerstaeckeri* in, flagellates in 349
  - T. sanguisuga* in, flagellates in 349
  - Tyrelliidae in 629
- Textiles**
  - arthropod pests of, book 322
  - permethrin in, persistence of 2516
  - pest control in, book 7
- TH-6040** (see Diflubenzuron)
- Thailand**
  - Aedes aegypti* in, on man 82
  - A. albopictus* in, on man 82
  - Anopheles* spp. in 96, 2904
  - Argas robertsi* in, on *Anastomus* 2815
  - Calliphoridae in 662
  - Culex pipiens* in 2945
  - C. quinquefasciatus* in 2945
  - ectoparasites in 2805
  - Ixodoidea in 2809
  - mites in 2809
  - Pthirus pubis* in, on man 2814
  - Schoengastia* spp. in, on *Rattus* 513
  - Whartonia dewitti* in, on *Rhinolophus* 730
- Thaumaleidae**, palpal sensilla in 3309
- Thea sinensis** (see Tea)
- theileri, *Culex***
- Theileria**
  - control of, vector control for 943
  - development in, effects of vector ecdysis on 276

**Theileria contd.**

- in  
cattle  
and in wild bovids 1722  
in southern Africa 942  
in Spain 3078  
goat, in Egypt 2756  
Ixodoidea, transmission of 953  
*Rhipicephalus appendiculatus*,  
transmission of 942  
sheep, in Egypt 2756
- Theileria annulata**  
control of, immunization for 944  
development in, effects of vector ecdysis  
on 276
- in  
cattle, in Africa 936  
*Hyalomma anatolicum*, enzymes in  
3077  
*H. detritum*, transmission of 962  
taxonomy of 936  
vectors of 936
- Theileria bovis**, in, cattle, in southern Africa  
942
- Theileria lawrencei**  
in  
cattle  
in southern Africa 942  
in Zimbabwe 937
- Theileria mutans**  
development in, effects of vector ecdysis  
on 276
- in  
African buffalo, in East Africa 2474  
*Amblyomma* spp., transmission of 942  
*A. gemma*, transmission of 2474  
*A. variegatum*  
development of 499  
transmission of 3060  
cattle  
in Africa 936  
in southern Africa 942  
taxonomy of 936  
vectors of 936
- Theileria parva** (see also East Coast fever)  
in  
cattle  
in Africa 936  
in southern Africa 942  
mouse, development of 698  
*Rhipicephalus appendiculatus*  
artificial infection with 2225  
culturing of 1940  
detecting of 3089  
infectivity of, effects of  $\gamma$ -irradiation  
on 3075  
monitoring of 2215  
transmission of 698, 1722  
taxonomy of 936  
vectors of 936
- Theileria parva bovis** (see *T. bovis*)
- Theileria parva lawrencei** (see *T. lawrencei*)
- Theileria sergenti**  
in, cattle, in Africa 936  
taxonomy of 936  
vectors of 936
- Theileria tauroragii** 942  
in, *Rhipicephalus appendiculatus*,  
development of 709
- Theileria velifera**  
development in, effects of vector ecdysis  
on 276
- in  
*Amblyomma variegatum*, transmission  
of 3060  
cattle, in southern Africa 942
- Thelazia**, in, cattle, increasing susceptibility  
to *Moraxella bovis* 2200
- Thelazia gulosa**, in, Muscidae, in Dagestan  
883
- Thelazia skrjabini**, in, *Musca autumnalis*, in  
Dagestan 883
- Thelohania**  
in  
*Aedes* spp., in Ukraine 1025  
Simuliidae, in Guatemala 144
- Thelohania bracteata** (see *Amblyospora*  
*bracteata*)
- Thelohania fibrata**  
in  
Simuliidae  
in Guatemala 144  
in Ukraine 1059

**Thelohania fibrata contd.**

- in contd.  
*Simulium* spp., in German Federal  
Republic 1268
- Thelohania minuta** (see *Amblyospora*  
*minuta*)
- Thelohania obesa** (see *Parathelohania obesa*)
- Thelohania opacita** (see *Amblyospora*  
*opacita*)
- Thelohania solenopsae**, in, *Solenopsis* spp.,  
in Brazil 1627
- Thelohania varians**  
in  
Simuliidae, in Ukraine 1059  
*Simulium* spp., in German Federal  
Republic 1268
- Theobromine** (see 1*H*-Purine-2,6-dione, 3,7-  
dihydro-3,7-dimethyl-)
- Thermocyclus infrequens nigerianus**, in  
Nigeria 637
- Thesauri**, veterinary science 1990, 1991,  
1992, 1993, 1994
- Thiirane**, 2,2-dimethyl-3-[3-methyl-5-(4-  
methylphenoxy)-3-pentenyl]-, not active  
as insect growth regulator 1988
- Thiocyanic acid**, 2-(2-butoxyethoxy)ethyl  
ester, against, *Culicoides occidentalis*  
2385
- Thiodan** (see Endosulfan)
- Thiodicarbonyl diamide** ( $[(H_2N)C(S)]_2S$ ),  
tetraethyl-, against, *Knemidokoptes*  
*pilae*, on budgerigar 1663
- Thiomuscimol** (see 3(2*H*)-Isothiazolone, 5-  
(aminomethyl)-)
- Thioperoxydicarbonyl diamide**  
( $[(H_2N)C(S)]_2S_2$ ), tetraethyl- (see  
Disulfiram)
- Thiotepa** (1,1',1''-phosphinothioylidynetris[a-  
ziridine])  
in *Culex quinquefasciatus*, duration of  
sterilisation by 100  
in *Periplaneta americana*, effects on  
ovaries of 1165  
sterilant for  
*Culex quinquefasciatus* 100  
*Culicoides nubeculosus* 3306  
vapour pressure of 2272
- Thiourea**  
in *Sarcophaga ruficornis*  
effects on glycogen synthesis in  
ovarioles of 1355  
effects on reproduction of 2421
- Thiourea**, *N*-(4-chloro-2-methylphenyl)-*N,N*-  
dimethyl- (see Chloromethiuron)
- thiouraxi**, *Haematobia*
- Thirst**, in pig, caused by *Vespula* 914
- Thogoto virus**  
in  
*Amblyomma variegatum*, in Kenya  
1641  
*Hyalomma anatolicum*, in Iran 1637,  
2211
- tholloni**, *Amblyomma*
- tholozani**, *Alectorobius* (see *Ornithodoros*  
*tholozani*)
- tholozani**, *Ornithodoros* (*Alectorobius*)
- Thomomys bottae**  
*Geomydoecus* spp. on 2854  
in North America 1171, 3164  
*G. guadalupensis* on, in North America  
2849  
*G. hueyi* on, in California 31  
*G. shastensis* on  
in California 31  
in Oregon 31
- Thomomys bulbivorus**, *Geomydoecus*  
*oregonus* on, in Oregon 31
- Thomomys townsendii**, *Geomydoecus*  
*idahoensis* on, in USA 31
- Thomomys umbrinus**  
*Geomydoecus* spp. on 2854  
in Mexico 1492  
in North America 1171, 2849, 3164
- Thrassis fatus**  
in USA 1753  
on *Spermophilus tridecemlineatus*, in  
Texas 1753  
*Yersinia pestis* in, transmission of 1753
- L-Threonine**  
in *Anopheles stephensi*, effects of  
*Plasmodium berghei* on 1199  
in *Psoroptes cuniculi* 2486  
in *Psoroptes ovis* 2486

- Thrush**, garden (see *Turdus hortulorum*)
- Thrush**, Naumann's (see *Turdus naumanni*)
- Thrush**, pale (see *Turdus pallidus*)
- thummi**, *Chironomus* (see *C. riparius*)
- Thylogale brunii**, *Schoengastia bicoxalae* on,  
in Papua New Guinea 3426
- Thyreophagus entomophagus**, taxonomy of,  
characters distinguishing *T. gallegoi* and  
1971
- Thyreophagus gallegoi**  
sp. nov., description of 1971  
in Spain 1971  
in flour, in Spain 1971  
in house dust, in Spain 1971
- Thyroxine** (see L-Tyrosine, *O*-(4-hydroxy-  
3,5-diiodophenyl)-3,5-diiodo-)
- Thyrsocnema incisilobata** (see *Sarcophaga*  
*incisilobata*)
- Thysanoptera**, mounting media for 1149
- thysanota**, *Genoneopsylla*
- Tiamastus**, on Rodentia, in Argentina 357
- tibetensis**, *Haemaphysalis*
- tibiamaculata**, *Triatoma*
- Tibrogargan virus**  
in  
Asian buffalo, antibodies to 3303  
cattle, antibodies to 3303  
*Culicoides brevitarsis*, in Queensland  
3303
- Tick** (see Ixodoidea)
- Tick-borne encephalitis** (see Encephalitis,  
tick-borne)
- Tick infestations**  
in Asian buffalo 2752  
in *Bos indicus*  $\times$  *B. taurus* 258, 259,  
260, 1936, 3079  
in *Bos taurus*  $\times$  *B. indicus* 961, 2742,  
3073  
in camel 251, 2211, 2752  
in cat 3064  
in cattle 16, 245, 246, 253, 258, 259,  
260, 700, 714, 937, 945, 946, 948, 952,  
959, 962, 964, 975, 1108, 1124, 1126,  
1395, 1401, 1411, 1460, 1635, 1640,  
1641, 1642, 1645, 1649, 1924, 1936,  
1938, 1939, 1943, 1948, 2211, 2212,  
2217, 2218, 2224, 2463, 2471, 2476,  
2525, 2746, 2752, 2820, 2837, 3061,  
3068, 3072, 3073, 3078, 3079, 3085,  
3089, 3393, 3394, 3415  
in dog 278, 533, 965, 1398, 1409, 1459,  
1943, 2463, 2470, 3063, 3086, 3400  
in domestic animals 695  
in donkey 2463, 3394  
in fowl 1493, 2211  
in game animals 1888  
in goat 241, 265, 972, 2211, 2750, 2752,  
2756, 3060, 3062, 3064  
in guinea-pig 3390  
in guineafowl 1493  
in livestock 18, 19, 1480, 2831  
in man 269, 1398, 1942, 2316, 2463  
in mouse 3390  
in mule 3064  
in partridge 3064  
in pig 16  
in pigeon 2211  
in rabbit 1939, 2214, 2869, 3390  
in sheep 320, 1410, 1641, 1939, 1948,  
2211, 2524, 2750, 2752, 3048, 3060,  
3086, 3394, 3395  
in zebu 259, 938, 2538
- Tick paralysis**, in sheep, caused by  
*Rhipicephalus evertsi* 3395
- Tifatol** (see Benzenamine, 2,4-dimethyl-*N*-  
(3-methyl-2(3*H*)-thiazolylidene)-)
- Tigriopus**, *Coelomomyces opifexi* in, mode  
of entry of 107
- Tilapia**, preying on, *Anopheles* spp., and  
biological control using 3194
- Tilapia hornorum**, preying on, *Chironomus*  
*decorus*, and biological control using, in  
California 670
- Tilapia mossambica**, preying on,  
*Chironomus decorus*, and biological  
control using, in California 670
- Tilapia mossambica**  $\times$  *hornorum*, preying  
on, Chironomidae, and biological control  
using, in California 1911
- Tilapia nilotica**, *Bacillus thuringiensis* in, not  
pathogenic 1797



- Tilapia zillii**  
on *Myriophyllum spicatum*, and biological control using, in California 2345  
on *Potamogeton pectinatus*, and biological control using, in California 2345
- Tilligerry virus**, in, Culicidae, in New South Wales 2033
- Tim**  
against  
*Anopheles atroparvus* 75  
*Culex molestus* 75
- Timbers**, *Dermestes maculatus* in, damage caused by 3057
- timmi**, *Geomydoecus*
- Tin cans**, Culicidae in, in Philippines 856
- Tinaroo virus**, in, *Culicoides brevitarsis*, in Queensland 862
- Tinolestes**, taxonomy of 2903
- Tiphiidae**, in British Isles 691
- Tipula pomposa**  
in South Africa 2716  
preyed on by, *Tabanus biguttatus*, in South Africa 2716
- Tipulidae**, chromosomes in 1995
- tiscadaea**, *Echidnophaga*
- Tithonia** hedges, *Glossina palpalis* resting in, in Cameroon 1700
- titillans**, *Haematobia throuxi*
- titillans**, *Lyperosia* (see *Haematobia throuxi* titillans)
- titillatrix**, *Cephalopina*
- Tityus**, in Argentina 1477
- Tityus serrulatus**  
preyed on by, *Camponotus abdominalis* 3433  
venom of 1677, 2780
- Tityus trivittatus charreyroni**  
descriptions of 2496  
taxonomy of 2496
- Tityus trivittatus dorsomaculatus**  
descriptions of 2496  
taxonomy of 2496
- Tityus trivittatus fasciolatus**  
descriptions of 2496  
taxonomy of 2496
- Tityus trivittatus trivittatus**  
descriptions of 2496  
taxonomy of 2496
- Toad**, *Ornithodoros* spp. on, in Georgia (USSR) 3408
- TOCP** (see Phosphoric acid, tris(2-methylphenyl) ester)
- Togo**  
*Haemolaelaps* spp. in 3422  
*Simulium* spp. in 1581, 1704
- togoi**, *Aedes*
- Tokelau Islands**  
*Aedes aegypti* in 1833  
*Culex quinquefasciatus* in 1833
- toledo**, *Ornithocoris*
- Tomato** (*Lycopersicon esculentum*)
- Tomato** (stored fruit), naled in, uptake from air of 2266
- Tonate virus**  
in  
*Oeciacus vicarius*  
in Colorado 1749  
in South Dakota 1749  
*Petrochelidon pyrrhonota*  
in Colorado 1749  
in South Dakota 1749
- Tonatia nicaraguae**, *Psorergatoides*  
*surinamensis* on 736
- Tonga**, *Aedes* spp. in 1236
- tongae**, *Aedes*
- Topomyia yanbarensis**  
*Coelomomyces stegomyiae* in, in Taiwan 2031  
in Taiwan 2031
- torrentium**, *Culex*
- Tortoise**, *Ornithodoros* spp. on, in Georgia (USSR) 3408
- Tortoise burrows**, *Latrodectus* spp. in, in Uzbekistan 2778
- townsvillensis**, *Forcipomyia*
- Toxaphene** (chlorinated camphenes containing 67 to 69% chlorine)  
against  
*Psoroptes cuniculi* 2487  
*P. ovis* 2487  
in *Buphagus erythrorhynchus*, toxicity of 1643
- Toxaphene** *contd.*  
resistance to, in, *Boophilus microplus*, in South Africa 939
- Toxid** (see DDT, with HCH)
- Toxins**  
*Androctonus australis* 742  
*A. mauretanicus* 2253  
*Arctia caja* 232  
*Bacillus sphaericus* 1537  
*B. thuringiensis* 197, 597  
*Centruroides limpidus* 522  
*Latoia vivida* 485  
*Leiurus quinquestriatus* 742  
*Tityus serrulatus* 1677, 2780
- Toxoglugea**, in, *Anopheles culicifacies*, in Rajasthan 609
- Toxoglugea variabilis**  
sp. nov., description of 2653  
in, *Bezzia* spp., in Sweden 2653
- Toxorhynchites**  
bibliography 1241  
biology of, review 3139  
in Canada 1533  
in Philippines 856  
in Soviet Maritime Territory 3264  
in tree holes, in Kenya 2876  
taxonomy of, types in US National Museum of Natural History 2943
- Toxorhynchites amboinensis**  
arboviruses in, infectivity of 589  
biology of 2124  
cell cultures from 589  
dengue virus in, infectivity of 2883  
Japanese encephalitis, virus in, infectivity of 2883  
Nodamura virus in, pathogenicity of 1773  
Saint Louis encephalitis, virus in, infectivity of 2883
- Toxorhynchites brevipalpis**  
antennae in, sensilla on 827  
egg size in 2044  
feeding behaviour in 1231  
in Kenya 54, 2876  
in *Pandanus rabaiensis* axils, in Kenya 54  
in tree holes, in Kenya 2876  
life history of 2044  
preying on  
*Aedes aegypti* 2044  
*A. polynesiensis* 1231  
pupation in, predicting of 60
- Toxorhynchites rutilus rutilus**  
adults of, transporting of 3226  
feeding behaviour in 1756  
in USA 65  
preying on  
*Aedes aegypti* 1756  
in Florida 65  
seasonal abundance of 65
- Toxorhynchites rutilus septentrionalis**  
egg size in 2044  
handling time in, evolution of 1242  
in USA 1196, 1210  
in tyres, in Ohio 1196  
life history of 2044  
preying on  
*Aedes aegypti* 2044  
*A. triseriatus* 1242  
pupae of 1210
- Toxorhynchites splendens**  
biology of 2124  
enzymes in 625
- TPP** (see Phosphoric acid, triphenyl ester)
- tracheacolum**, *Sternostoma*
- Trachydosaurus rugosus**  
*Aponomma hydrosauri* on  
development of 963  
mating by 1951
- Trail pheromones**  
Blattidae 3163  
*Monomorium pharaonis* 229
- Transaminase**, glutamic-oxaloacetic (see Aminotransferase, aspartate)
- Transaminase**, glutamic-pyruvic (see Aminotransferase, alanine)
- transcaspica**, *Bembix*
- Transferase**, glutathione S-  
in *Musca domestica*  
induction by phenobarbital of 3343  
role in EPN resistance of 206  
role in insecticide resistance of 1606
- transiens**, *Parabyssodon* (see *Simulium transiens*)
- transiens**, *Simulium* (*Parabyssodon*)
- transkaucasica**, *Formica*
- Transpermethrin** ((3-phenoxyphenyl)methyl (1*RS*-trans)-3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate)  
metabolism of, review 1445
- transvaalica**, *Parabuthus*
- Trap**  
for  
*Corethrella* 447  
dung-associated Coleoptera and phoretic mites 3380  
*Musca domestica* 1360  
Tabanidae 1376
- Trap**, awning screen skirt, for, *Glossina pallidipes* 2685
- Trap**, bait  
for  
*Amblyomma americanum* 604  
*Cochliomyia hominivorax* 1464, 2429  
*C. macellaria* 2429  
*Culicoides* spp. 1842  
Phlebotominae 2150
- Trap**, biconical  
construction details for 1095  
for  
*Glossina* spp. 150, 435, 1095, 1881, 1883, 2989  
*G. morsitans* 1861  
*G. pallidipes* 3002  
*G. palpalis* 2986, 2987  
*G. tachinoides* 2986, 2987, 2988
- Trap**, biconical electrocuting  
description of 2983  
for, *Glossina* spp. 2983
- Trap**, box, for, *Tabanus* 1906
- Trap**, Challier-Laveissiere, for, *Glossina* spp. 2996
- Trap**, electric grid  
for  
*Glossina* 647  
*G. morsitans* 2161
- Trap**, electrocuting, for, *Cricotopus* spp. 2413
- Trap**, electrocutor, for, *Glossina* spp. 1881, 1882, 1883
- Trap**, emergence  
cattle-proof 2699  
description of 3252  
for  
Chironomidae 1905  
Culicidae 3252  
*Culicoides variipennis* 1575  
*Haematobia irritans* 2699
- Trap**, exit  
for  
*Chrysomya chloropyga* 2928  
*Culex quinquefasciatus* 2928
- Trap**, Langridge box screen, for, *Glossina pallidipes* 2685
- Trap**, Malaise  
for  
*Glossina morsitans* 1317  
Tabanidae 3015
- Trap**, Manitoba, for, *Hybomitra lasiophthalma* 2431
- Trap**, oviposition  
for  
*Aedes aegypti* 2133  
*A. simpsoni* 591  
*A. triseriatus* 2902, 3280
- Trap**, pipe  
description of 590  
for, *Culex tarsalis* 590
- Trap**, screen  
for  
*Glossina* spp. 1696, 1697  
*G. pallidipes* 3002
- Trap**, sex-attractant, for, *Musca domestica* 3371
- Trap**, sticky  
adhesives for 2542  
description of 2971  
for  
*Blatta orientalis* 2542  
*Blattella germanica* 2542  
*Haematopota pluvialis* 3338  
Phlebotominae 2971  
*Simulium* spp. 2152  
*Tabanus* 1906
- Trap**, time-sorting, for, Scarabaeidae 2426

# Trap, truck for

- Culicoides* spp. 2143
- C. phlebotomus* 2387
- Trap, West Australian blowfly, for, *Musca vetustissima* 3035
- Trap, wind-oriented, for, *Cochliomyia hominivorax* 2434

# trapezoidum, *Leptotrombidium*

- travisi*, *Culicoides*
- tredecimguttatus*, *Latrodectus*

# Tree felling, Ixodidae as affected by

3411

# Tree holes

- Aedes daitensis* in, in Ryukyu Islands 2947
- A. detritus* in, in France 3297
- A. nipponicus* in, in Hokkaido 3271
- A. oreophilus* in, in Hokkaido 3271
- A. sierrensis* in, in California 2108
- A. triseriatus* in, in Indiana 2902
- Ceratopogonidae in, in Spain 129
- Culex quinquefasciatus* in, sampling of 2116
- Culicidae in, habitat segregation among 2876
- Culicinae in, in Nigeria 602
- Lutzomyia trinidadensis* in, in Venezuela 632
- mites in nests in, in Austria 930
- mosquito control in, insecticides for 2108
- Orthopodomyia alba* in, in West Virginia 1821
- Phlebotominae in, in Bihar 1262
- Phlebotomus major* in, in Sinkiang-Uighur 421

# Trehalase

- in *Periplaneta americana*
- localisation of 1734
- properties of 1734
- in *Simulium damnosum* complex, use as taxonomic character of 3314

# Trehalose (see $\alpha$ -D-Glucopyranoside, $\alpha$ -D-glucopyranosyl)

Trematoda 1119

- Dicrocoelium dendriticum* 316, 688, 1068, 3053
- D. lanceolatum* 2727
- Prosthogonimus ovatus* 316

# Trematodes, index-catalogue of

1119

# Tremor, in rat, caused by cismethrin

1452

# Triacantane, 2-methyl-, in *Musca domestica*

cuticle 2706

# Triacantane, 3-methyl-, in *Musca domestica*

cuticle 2706

# Triacantane, 4-methyl-, in *Musca domestica*

cuticle 2706

# trianguliceps, *Ixodes*

# triannulatus, *Anopheles*

# Trianthema portulacastrum, ecdysterone in,

production in callus cultures of 3130

# Triatoma

- descriptions of 1474
- distribution of 1474

# *Triatoma arthurneivai*

- genitalia in 2574
- habitats of 2574
- in Brazil 2574

# *Triatoma barberi*

- blood-feeding of, membranes for 3249
- in Mexico 352
- in dwellings, in Mexico 352

# *Trypanosoma cruzi* in, in Mexico

352

# *Triatoma brasiliensis*

- domiciliary in 1744
- in Brazil 811, 1744

# *Triatoma circummaculata*

- genitalia in 2574
- habitats of 2574
- in Brazil 2574

# *Triatoma costalimai*

- genitalia in 2574
- habitats of 2574
- in Brazil 2574

# *Triatoma gerstaeckeri*

- in USA 349
- Trypanosoma cruzi* in, in Texas 349

# *Triatoma guasayana*

- genitalia in 2574
- habitats of 2574
- in Brazil 2574

# *Triatoma infestans*

- activity in, rhythm of 315
- aorta in 2297

# *Triatoma infestans* contd.

- biology of 1474
- blood-meals in, identification of 1506
- control of 812, 3173
- insecticides for 560, 1745, 1746, 2018
- copulatory apparatus in, ectodermal gland of 2298
- descriptions of 1474
- domiciliary in 1744
- enzymes in 35, 41, 1745, 3169
- heart in 2297
- in Bolivia 1474, 1744
- in Brazil 42, 811, 812, 1744, 2293, 2294, 3167
- in Chile 3176
- in dwellings, in Brazil 812, 2293, 2294
- light responses in 1123
- Malpighian tubules in 1510, 2022
- nutritional status of 2294
- on man, hypersensitivity to 3167
- parasitised by, *Telenomus fariai*, in Bolivia 1474
- parathion in
- esterase inhibition by 1745
- metabolism of 3169
- population dynamics of 2293
- stridulatory groove in 3177
- Trypanosoma cruzi* in
- development of infection with 2017
- in Chile 3176
- infectivity of 351, 806
- isolating of 36
- transmission of 3173
- xenodiagnosis of 351
- virus-like particles in, pathogenicity of 808

# *Triatoma lenti*

- genitalia in 2574
- habitats of 2574
- in Brazil 2574

# *Triatoma maculata*

- genitalia in 2574
- habitats of 2574
- in Brazil 2574

# *Triatoma melanocephala*

- descriptions of 2296
- in Brazil 2296
- in dwellings, in Brazil 2296
- life-cycle of 2296
- on Bromeliaceae, in Brazil 2296
- Trypanosoma cruzi* in, in Brazil 2296

# *Triatoma pallidipennis*, chromosomes in

1502

# *Triatoma pseudomaculata*

- domiciliary in 1744
- in Brazil 811, 1744

# *Triatoma rubrofasciata*

- feeding behaviour in, model 2021
- in Brazil 811
- tibial pads in 3168

# *Triatoma rubrovaria*

- genitalia in 2574
- habitats of 2574
- in Brazil 2574

# *Triatoma sanguisuga*

- in USA 349
- Trypanosoma cruzi* in, in Texas 349

# *Triatoma sordida*

- biology of 1474
- descriptions of 1474
- domiciliary in 1744
- feeding behaviour in 805
- in Bolivia 1474
- in Brazil 806, 811, 812, 1744
- in dwellings, in Brazil 812
- parasitised by, *Telenomus fariai*, in Bolivia 1474
- Trypanosoma cruzi* in, infectivity of, strain differences in 806

# *Triatoma spinolai*

- in Chile 3176
- Trypanosoma cruzi* in, in Chile 3176

# *Triatoma tibiamaculata*

- genitalia in 2574
- habitats of 2574
- in Brazil 2574

# Triatominae

- blood-feeding in, evolution of 1170
- control of
- biological 2381
- insecticides for 807, 1137
- flagellates in, in Paraguay 3174
- in Bolivia 1474

# Triatominae contd.

- in dwellings
- in Brazil 807, 1137, 2299
- in Paraguay 3174
- parasites of, in Brazil 42
- pathogens in, modes of transmission of 1091
- phagostimulants for 1471
- Trypanosoma cruzi* in
- book 1504
- review 3138
- transmission of 326, 3172
- Triazin red, marker for, Siphonaptera 360
- 1,3,5-Triazine-2,4-diamine, 6-azido-N-cyclopropyl-N'-ethyl- against
- Fannia canicularis*, in fowl dung 2428
- Musca domestica*, in fowl dung 2428
- in fowl, residues of 2428
- in fowl eggs, residues of 2428
- in *Stomoxys calcitrans*, not inhibiting chitin synthase 3032
- 1,3,5-Triazine-2,4,6-triamine, N-cyclopropyl- against
- Fannia canicularis*, in fowl dung 2428
- Lucilia cuprina*, on sheep 169
- Musca autumnalis*, in dung 2436
- M. domestica*
- in dung 2436
- in fowl dung 2428, 3012
- in fowl, residues of 2428
- in fowl eggs, residues of 2428
- Tribolium castaneum*, sterilisation of, chemosterilants for 1755
- Tribolium confusum*
- control of, growth regulators for 1453
- Hymenolepis diminuta* in
- effects of 1391
- effects of mebendazole on 1625
- H. nana* in, effects of mebendazole on 1625
- Tricarboxylic acid cycle, in *Musca domestica* 157
- Trichillum adisi*
- sp. nov., description of 3379
- in Brazil 3379
- on *Bradyus tridactylus*, in Brazil 3379
- Trichinella spiralis*, in, Crustacea, transmission of 746
- Trichlorfon (see Trichlorophen)
- Trichlormetaphos-3 (see Phosphorothioic acid, O-ethyl O-methyl O-(2,4,5-trichlorophenyl) ester)
- Trichlorophen (dimethyl (2,2,2-trichloro-1-hydroxyethyl)phosphonate) against
- Anopheles atroparvus* 75
- Argas persicus*, in fowl housing 1718
- Cheyletiella yasguri*, on dog 12
- Cimex lectularius*, in fowl housing 1718
- Culex molestus* 75
- C. pipiens* 2604
- Diptera 532
- Euproctis chrysorrhoea* 3377
- Hypoderma* spp., on cattle 878, 2689, 3330
- H. bovis*, on cattle 1591
- Lucilia sericata*, on sheep 2707
- Musca domestica*, in cattle farms 477
- M. sorbens*, in cattle farms 477
- Oestrus ovis*, on sheep 3331
- Ornithodoros lahorensis* 3410
- Periplaneta americana* 23, 1681
- Sarcoptes scabiei*, on pig 1959
- Stomoxys nigra*, on cattle 203
- Wohlfahrtia magnifica*, on sheep 3349
- in *Bacillus thuringiensis*, not toxic 312
- in *Musca domestica*, effects on fertility of 2176
- resistance to, in
- Cimex lectularius*, loss of 2572
- Culex pipiens*, and cross-resistance 2604
- Musca domestica* 1893
- development of 2176
- in German Democratic Republic 3350
- synergists for 2604
- with coumaphos, against, *Haematopinus tuberculatus*, on Asian buffalo 2250



- Trichlorphon** *contd.*  
 with lindane  
 against  
*Anopheles* spp. 2039  
*A. atroparvus* 75  
*Culex molestus* 75  
 in building materials, persistence of 2039  
 with molasses 477
- Trichocera saltator**  
 in UK 1602  
 in human cadavers, in UK 1602
- Trichocorixa**, predators of, detecting of 1483
- Trichodectes canis**  
 in India 2470  
 in Netherlands 1135  
 on man, in Netherlands 1135
- Trichodectes melis**  
 in Hungary 2012  
 on *Meles meles*, in Hungary 2012
- Trichodectes mustelae**  
 in Hungary 2012  
 on *Mustela nivalis*, in Hungary 2012
- Trichoderma**, in, Culicidae, in Ukraine 1025, 1757
- Trichogramma**, parasitising, aquatic Diptera, in New York State 3373
- Trichogramma californicum** 3373
- Trichogramma julianoi**  
 sp. nov., description of 3372  
 in USA 3372, 3373  
 parasitising  
*Elgiva sundewalli*, in New York State 3373  
*Sepedon fuscipennis*, in New York State 3372, 3373  
*Tetanocera* spp., in New York State 3373  
 seasonal abundance of 3373
- Trichogramma semblidis** 3373
- Tricholoproceta**, descriptions of 893
- Tricholipeurus lipeuroides**  
 in Canada 556  
 on *Odocoileus*, in Alberta 556
- Tricholipeurus parallelus**  
 in Canada 556  
 on *Odocoileus*, in Alberta 556
- Trichomycetes**, in, Culicidae, in Nebraska 2043
- Trichoplusia ni**  
 enzymes in 2795  
*Nosema algerae* in, replication of 112
- Trichopria**, parasitising, *Tabanus nigrovittatus*, in Connecticut 1603
- Trichopria cilipes** (see *Aclista alticollis*)
- Trichopria lonchaeorum**  
 in Romania 453  
 parasitising, *Piophilha casei*, in Romania 453
- Trichopria major**  
 in Romania 453  
 parasitising  
*Lucilia sericata*, in Romania 453  
*Paregle* spp., in Romania 453  
*Piophilha casei*, in Romania 453
- Trichopria nigra**  
 in Romania 453  
 parasitising, *Piophilha casei*, in Romania 453
- Trichopria oxygaster**  
 in Romania 453  
 parasitising, *Piophilha casei*, in Romania 453
- Trichopria parvula** (see *Monelata parvula*)
- Trichopria tabanivora** 1603
- Trichopria tetratoma** (see *T. oxygaster*)
- Trichoprosopon digitatum**  
 in Venezuela 1222, 2362  
 in *Heliconia aurea* bracts, in Venezuela 1222  
 in *Heliconia aurea* floral bracts, cohorts of 2362
- Trichoptera**  
 in rivers  
 as indicators of effects of insecticides 1292  
 effects of methoxychlor on 1281  
 preying on  
*Simuliidae*, in USSR 1045  
*Simulium* spp., in Ivory Coast 1849  
 pyrethroids in, toxicity of 876
- Trichoribates novus**  
 Anoplocephalata in, in USSR 1081  
 in USSR 1081
- Trichoribates trimaculatus**  
 Anoplocephalata in, in USSR 1081  
 in USSR 1081
- Trichuris**, in, pig, in German Federal Republic 1959
- Tricladida**, in, aquatic habitats, effects of pirimiphos-methyl on 2942
- 5-Tricosene**, (Z)-, *Haematobia irritans* sex-pheromone component 1898
- 9-Tricosene**  
 (E)-, *Musca domestica* responses to 1073  
 (Z)- (see Muscalure)
- tridentatus**, *Argas*
- trilineatus**, *Buthotus*
- trimaculatus**, *Tabanus*
- trimaculatus**, *Trichoribates*
- Trinidad and Tobago**  
*Culex simulator* in 109  
 Culicidae in 614  
*Culicoides phlebotomus* in  
 filariae in 2386  
 on man 2386, 2387
- trinidensis**, *Lutzomyia*
- triplectinata**, *Stenoponia*
- Tripoli** (see Kieselguhr)
- Triprene** (S-ethyl (2E,4E)-11-methoxy-3,7,11-trimethyl-2,4-dodecadienethioate) against, *Culex pipiens* 1754  
 in *Culex pipiens*, effects of 1754
- Tripteroides bambusa**  
 breeding places of 603  
*Coelomomyces macleayae* in, in Taiwan 2031  
*C. stegomyiae* in, in Taiwan 2031  
 in Japan 603  
 in Taiwan 2031  
 in tyres, in Hokkaido 603
- tripus**, *Polygenis*
- triseriatus**, *Aedes*
- tritaeiorhynchus**, *Culex*
- tritici**, *Pyemotes*
- Triticum aestivum** (see Wheat)
- Triticum durum** (see Wheat)
- Tritriacontane**, 15,19-dimethyl-  
*Glossina austeni* responses to 649  
*G. morsitans* responses to 649
- 9-Tritriacontene**, (Z)-, in *Musca domestica* cuticle 2706
- trivittatus**, *Aedes*
- trivittatus**, *Tityus*
- Trivittatus virus**, in, *Aedes trivittatus*, in Indiana 2900
- Trixacarus caviae**  
 control of, acaricides for 510, 1978  
 in USA 510, 1978, 1979, 1980  
 on guinea-pig alopecia caused by 1978  
 effects of 1979, 1980  
 hyperkeratosis caused by 1978  
 in USA 1979  
 skin lesions caused by 510  
 taxonomy of  
 characters distinguishing *Notoedres* and 1978  
 characters distinguishing *Sarcoptes scabiei* and 1978, 1980
- Trogidae**, in Saudi Arabia 2529
- Trogopterus xanthipes**  
*Leptotrombidium yunnanensis* on, in Yunnan 1667  
*Macrostylophora hebeiensis* on, in China 1188
- Trombicula akamushi deliensis** (see *Leptotrombidium deliense*)
- Trombicula autumnalis** (see *Neotrombicula autumnalis*)
- Trombicula subakamushi** (see *Chiroptella subakamushi*)
- Trombiculidae**  
 control of, acaricides for 1412  
 in Afghanistan 695  
 in Ryukyu Islands 2230  
 in oil-palm plantations, in West Malaysia 1412, 1973  
 on *Bandicota bengalensis*, in Burma 2479  
 on mammals, in Indiana 1966  
 on *Rattus*, in Burma 2479  
 on *Rattus tiomanicus*, in West Malaysia 1412
- Trombiculidae** *contd.*  
 on Rodentia  
 in Indonesia 1963  
 in Kiangsu 2760  
 on small mammals  
 in Africa 1660  
 in Bulgaria 1664  
 in Maritime Territory 491  
 on *Sylvilagus floridanus*  
 in Indiana 3145  
 in USA 1155
- Trombiculindus guangdongensis** (see *Leptotrombidium guangdongense*)
- Trombiculindus nanlingensis** (see *Leptotrombidium nanlingense*)
- Trombidiformes**  
 on small mammals, in Czechoslovakia 933  
 taxonomy of, respiratory system characters for 741
- trompe**, *Cephenemyia*
- tropicalis**, *Lipeurus lawrensis* (see *Numidilipeurus lawrensis tropicalis*)
- tropicalis**, *Numidilipeurus lawrensis*
- Tropics**, human arbovirus diseases in, review 1945
- Tropisternus**, in animal waste lagoons, effects of organic pollution on 1814
- trouessarti**, *Cheyletus*
- Trouessartia**, on Passeriformes, in New Zealand 801
- Trout**, rainbow (see *Salmo gairdneri*)
- Trox**  
 in Saudi Arabia 2528  
 taxonomy of 2528
- truculentus**, *Parabuthus*
- truncatellus**, *Arrenurus*
- truncatum**, *Hyalomma*
- truncatum**, *Simulium*
- Trypaflavin**, marker for, Siphonaptera 360
- Trypaflavine** (see Acriflavine)
- Trypan blue**, marker for, Siphonaptera 360
- Trypanosoma**  
 control of 1083, 1306, 1308, 1587, 1886  
 vector control for 943, 1695, 2993  
 culture methods for 1470  
 development of, in vectors 1084  
 in  
 cattle  
 and in wild animals 1879  
 in Gambia 1299  
 in Niger 1302  
 tolerance of 3327, 3328  
*Glossina* spp.  
 detecting of 1312  
 infectivity of 1865, 1877  
 interaction of 1866  
 transmission of 1867  
*G. palpalis*, transmission of 2994  
 goat, tolerance of 3327, 3328  
 livestock, in Upper Volta 1304  
 sheep, tolerance of 3327, 3328  
 research on 1887  
 vectors of 1303, 1868  
 host preferences of 2150
- Trypanosoma brucei** (see also Sleeping sickness)  
 control of 1309  
 reservoir control for 1871  
 vector control for 1332, 1871  
 culture methods for 875  
 epidemiology of, role of tribal culture in 1871  
 foci of 1869  
 in  
 cattle  
 in Chad 1303  
 in Gambia 1298, 1305  
*Glossina fuscipes*, transmission of 1310  
*G. morsitans*  
 antigenic changes in 1335  
 sexual forms of 3326  
*G. pallidipes*, in Kenya 651, 1312  
*G. palpalis*, transmission of 1310, 1872, 1873  
*G. tachinoides*, transmission of 1873  
 livestock, in Zambia 1308  
 man  
 in Africa 1311  
 in Congo 1310  
 in Ivory Coast 1872  
 in Mozambique 1307

**Trypanosoma brucei** contd.

- in contd.  
 man contd.  
   in Nigeria 1309, 1322  
   in Tanzania 1871  
   in Upper Volta 644  
   in West Africa 1869, 1873  
   in Zambia 1333  
 pig  
   in Ivory Coast 1872  
   in West Africa 1869, 1873  
 metacyclic forms of, culture methods for 149  
 vectors of 644  
**Trypanosoma congolense**  
 antigens of, effects of cyclical transmission on 153  
 culture methods for 2162, 2381  
 epidemiology of 1870  
 in  
   cattle  
     in Chad 1303  
     in Ethiopia 1306  
     in Gambia 1298, 1305  
     in Mozambique 1307  
     in Senegal 1301  
   *Glossina morsitans*  
     development of 153  
     transmission of 1870, 2164  
   *G. pallidipes*  
     effects on mid-gut of 1114  
     in Kenya 1085, 1312  
   goat, local skin reaction to 2164  
   livestock, in Zambia 1308  
**Trypanosoma cruzi** (see also Chagas' disease)  
 control of  
   book 1504  
   integrated 38  
   vector control for 807, 812, 1137, 3173  
 human ecology and 38  
 in  
   cat, in Chile 3176  
   dog, in Chile 3176  
   man  
     in Brazil 42, 811  
     in Chile 3176  
     in French Guiana 1154  
     in Mexico 352  
     oral infectivity of 2299  
   mouse, oral infectivity of 2299  
   *Mus musculus*, in Mexico 352  
   *Panstrongylus megistus*, infectivity of 806  
   *Rattus norvegicus*, in Mexico 352  
   *Rhodnius neglectus*, infectivity of, strain differences in 806  
   *R. prolixus*  
     in Panama 2020  
     in Venezuela 37  
     lectins to 2295  
   rodents, in Texas 349  
   squirrel, in Mexico 352  
   *Triatoma barberi*, in Mexico 352  
   *T. gerstaeckeri*, in Texas 349  
   *T. infestans*  
     development of infection with 2017  
     in Chile 3176  
     infectivity of 351, 806  
     transmission of 1474  
     xenodiagnosis of 351  
   *T. melanocephala*, in Brazil 2296  
   *T. sanguisuga*, in Texas 349  
   *T. sordida*  
     infectivity of, strain differences in 806  
     transmission of 1474  
   *T. spinolai*, in Chile 3176  
   Triatominae, transmission of 326, 3172  
 metacyclic trypomastigotes of, isolating from vectors of 36  
 vectors of  
   book 1504  
   in Brazil 811  
   review 3138  
**Trypanosoma evansi**  
 hosts of 184  
 in  
   camel  
     in Chad 1303  
     in Ethiopia 1306

**Trypanosoma evansi** contd.

- in contd.  
 Tabanidae, transmission of 184  
 zebu, in Malaysia 2538  
**Trypanosoma gambiense** (see *T. brucei*)  
**Trypanosoma hedricki**  
 in  
   *Aedes aegypti*, not developing 2863  
   *Cimex brevis*, development of 2863  
   *Eptesicus fuscus*, in Ontario 2863  
   *Myotis lucifugus*, not infective 2863  
   *Rhodnius prolixus*, not developing 2863  
   *Steatonyssus occidentalis*, not developing 2863  
**Trypanosoma melophagium**, in, *Melophagus ovinus*, not pathogenic 3357  
**Trypanosoma rangeli**  
 in  
   *Rhodnius prolixus*  
     detecting of 813  
     in Panama 2020  
     in Venezuela 37  
     penetration of salivary glands by 1181  
**Trypanosoma rhodesiense** (see *T. brucei*)  
**Trypanosoma simiae**, in, livestock, in Zambia 1308  
**Trypanosoma theileri**, in, cattle, in Gambia 1298  
**Trypanosoma vivax**  
 in  
   *Boophilus microplus*, infectivity of 2466  
   cattle  
     in Chad 1303  
     in Ethiopia 1306  
     in Gambia 1298, 1305  
     in Mozambique 1307  
     in Senegal 1300, 1301  
   *Glossina morsitans*, transmission of 1878, 2164  
   *G. pallidipes*, in Kenya 1085  
   goat  
     in lymph 1878  
     local skin reaction to 2164  
   livestock, in Zambia 1308  
**Trypanosomiasis**  
 control of 1587  
 irrigation as affecting 1874  
 rural development as affecting 1874  
**Trypanozoon** (see *Trypanosoma*)  
**Trypsin**  
 in *Aedes aegypti* excreta 2076  
 in *Haematobia irritans* gut 3369  
 in *Stomoxys calcitrans* gut 3369  
**Trypsin inhibitor**  
 in *Boophilus microplus* 960  
 in *Stomoxys calcitrans* blood-meals, effects on digestion of 2437  
**Tryptamine, 5-hydroxy-** (see 1*H*-Indol-5-ol, 3-(2-aminoethyl)-)  
**L-Tryptophan**  
 in *Aedes togoi*, utilisation by *Brugia patei* of 68  
 in *Anopheles atroparvus*, utilisation by *Brugia patei* of 68  
 in *Psoroptes cuniculi*, not found 2486  
 in *Psoroptes ovis*, not found 2486  
*tsushimaensis*, **Hybomitra tuberculatus**, **Haematopinus tuberosum**, **Simulium tubifex**, in aquatic habitats, effects of pirimiphos-methyl on 2942  
**Tubifex tubifex**  
 preyed on by  
   *Gambusia affinis* 3213  
   *Poecilia reticulata* 3213  
**tubiformans**, **Gnathamitermes Tugon** (see *Trichlorphon*)  
**Tularemia** (see also *Pasteurella tularensis*)  
 in USSR 3413  
**Tumors** (see *Neoplasms*)  
**Tunga penetrans**  
 control of 566  
 removal for 2865  
 surgical removal for 48, 52  
 in Brazil 48  
 in Senegal 566  
 in Suriname 2865  
 life-cycle of 52  
 on man  
   effects of 2865

**Tunga penetrans** contd.

- on man contd.  
   in Brazil 48  
   in East Africa 52  
   in Senegal 566  
**Tunicamycin**, in *Stomoxys calcitrans*, not inhibiting chitin synthase 3032  
**Tunisia**  
   *Buthus occitanus* in 2255  
   *Culicoides circumscriptus* in 1251  
   *Leptotrombidium spatzi* in, on *Dipodillus* 2490  
   Phlebotominae in 2967  
   Scorpiones in, on man 2256  
**Tupaia glis**  
   *Gahrlepiea meridionalis* on, in Yunnan 1667  
   *Hylopecheyla malayi* on, in West Malaysia 2771  
*turanicum*, *Hyalomma marginatum turanicum*, *Hyalomma plumbeum* (see *H. marginatum turanicum*)  
*turanicus*, **Rhipicephalus**  
**Turbellaria** 2942  
   *Dugesia dorotocephala* 1830  
   *Mesostoma* 2115, 3229  
*turbidus*, **Ceratophyllus** (see *Megabothris turbidus*)  
*turbidus*, **Megabothris** (*Ceratophyllus*)  
*turdi*, **Ornithoica**  
*Turdus hortulorum*, *Haemaphysalis japonica* on, in Maritime Territory 2734  
*Turdus iliacus*, *Protocalliphora* spp. on, in USSR 2708  
**Turdus merula**  
   *Eufilaria* spp. in, in France 1573  
   *Lycocoris campestris* in nests of, in Switzerland 564  
*Turdus naumanni*, *Haemaphysalis japonica* on, in Maritime Territory 2734  
*Turdus pallidus*, *Haemaphysalis japonica* on, in Maritime Territory 2734  
*turkestanica*, **Hybomitra**  
**Turkey**  
   *Anopheles sacharovi* in 76, 2127  
   Blattaria in 788  
   malaria in 76, 2127  
   mites in, in house dust 3094  
   *Musca domestica* in, in poultry farms 3017  
   *Sarcoptes scabiei* in, on man 519  
   *Tabanus darimonti* in 3368  
**Turkeys** (*Meleagris gallopavo*)  
   *Plasmodium hermani* in, in Florida 837  
*Turlock virus*, in, *Culex tarsalis*, in California 2081  
*Twinnia*, maxillary sensilla in 3309  
*Twinnia hydroides* (see *Prosimulium hydroides*)  
*Twinnia subtibbelesi* (see *Prosimulium subtibbelesi*)  
*Tylenchida*, in, insects, book 1134  
*Typhloceras poppei*  
 in Morocco 3183  
   on *Apodemus sylvaticus*, in Morocco 3183  
*typhus*, **Hybomitra**  
**Typhus**, Queensland tick, tick transmission of 3137  
**Typhus**, Siberian tick, tick transmission of 3137  
**Tyramine** (see Phenol, 4-(2-aminoethyl)-)  
**Tyres**  
   *Aedes aegypti* in  
     in Fiji 412  
     in Florida 65  
   *A. atropalpus* in  
     in Indiana 3251  
     in New York State 1195  
     in Ohio 3251  
   *A. japonicus* in, in Hokkaido 3271  
   *A. triseriatus* in, in Wisconsin 2935  
   Culicidae in, in Hokkaido 603  
   *Toxorhynchites rutilus* in, in Ohio 1196  
*Tyroglyphus farinae* (see *Acarus siro*)  
*Tyroglyphus longior* (see *Tyrophagus longior*)  
*Tyrollichus casei*, antigens of 1669  
*Tyrophagus longior*  
 in Romania 980  
   on man, role in colitis of 980



**Tyrophagus putrescentiae**

- aggregation in, caused by *Lardoglyphus konoi* pheromone 3424
- alarm pheromone in 1652
- components of 3425
- antigens of 3097
- enzymes in, and in house dust 1964
- in Japan 288
- on budgerigar, in Japan 288

**Tyrosinase** (see Oxygenase, monophenol mono-)**L-Tyrosine**

- in *Aedes aegypti* diet, utilisation of 2047
- in *Aedes togoi*, utilisation by *Brugia patei* of 68
- in *Anopheles atroparvus*, utilisation by *Brugia patei* of 68
- in *Anopheles stephensi*, effects of *Plasmodium berghei* on 1199
- in *Cimex hemipterus* mycetocytes 2301
- in *Periplaneta americana* salivary glands 786

**L-Tyrosine, 3-hydroxy-, in *Anopheles atroparvus***, utilisation by *Brugia patei* of 68

- L-Tyrosine, O-(4-hydroxy-3,5-diiodophenyl)-3,5-diiodo-**
- in *Chironomus*, effects on development of 3256
- in *Culex quinquefasciatus*, effects on development of 3256

**L-Tyrosine, 3-hydroxy- $\alpha$ -methyl-** (see Methyl-dopa)**Tyrrhelia circularis**, in USA 629**Tyuleny virus**

- in *Ixodes uriae*, in Norway 702
- man, antibodies to 1947

**Uca pugilator**, enzymes in 877**Uganda**

- Aedes* spp. in, in *Colocasia axilis* 1116
- A. africanus* in 1112
- Glossina* spp. in 1877
- Notoedres* spp. in, on *Tadarida* 283
- Ruttenia loxodontis* in, on *Loxodonta* 2451

**Ulmus**, Ceratopogonidae in holes in, in Spain 129**ulysses, Haemolaelaps****umbratica, Hebecnema****umbratilis, Lutzomyia****umbricola, Leptotrombidium****Uncia uncia, Demodex cati** on, in San Antonio Zoo 2234**uncinatus, Ctenophthalmus****underwoodi, Eucorethra****ungulatum, Austrosimulium****unicolor, Attagenus****uniformis, Mansonia****Union of Soviet Socialist Republics**

- Acari in, on bats 1071
- Aedes* spp. in 1058
- in reservoir lakes 2588
- natural enemies of 88, 1757
- A. campestris* in 410
- A. caspius* in 403
- A. excrucians* in, natural enemies of 2590
- A. geniculatus* in, natural enemies of 2590
- A. vexans* in, on man 2597
- Amphipsylla rossica* in 2579
- Anaticola* spp. in 2567
- Anopheles* spp. in 86, 405, 1041, 1058, 1075, 1523
- A. atroparvus* in 87, 2596
- A. hyrcanus* in 1758
- A. maculipennis* in 850, 2596
- natural enemies of 1757, 2590
- A. messeae* in 404, 2596
- in rice-fields 56
- A. pulcherrimus* in 1758
- A. sacharovi* in 850, 851
- on man 853
- A. superpictus* in 1758
- Anoplura in, on small mammals 2571
- Argas persicus* in
- in fowl housing 1718
- mycoplasmas in 1029
- Argasidae in 1941
- arthropod-transmitted diseases in 1688
- arthropod-transmitted helminths in 316
- birds in, arthropod parasites of 1033

**Union of Soviet Socialist Republics contd.**

- blood-sucking flies in 1062
- on cattle 1521
- brucellosis in 3413
- Calliphora vicina* in 894
- Callospsylla caspia* in, bacteria in 355
- C. kazbegiensis* in, on *Apodemus* 816
- Cataglyphis aenescens* in, trematodes in 3053
- Cephalopina titillatrix* in, on camel 3332
- Ceratopogonidae in 1024, 1079
- Ceratozetoidea in, cestodes in 1081
- Cimex lectularius* in, in fowl housing 1718
- Coptopsylla* spp. in, in gerbil burrows 1518
- Coquillettia richiardii* in 1031
- Cricotopus sylvestris* in, in rice-fields 56
- Culex martinii* in 77
- C. molestus* in, natural enemies of 1757
- C. pipiens* in, natural enemies of 1890, 2590
- C. territans* in 77
- Culicidae in 411, 841, 852, 1024, 1079, 1219, 1548, 1760, 2346, 2594, 3263, 3264
- natural enemies of 1019, 1025, 1038
- Culicoides* spp. in 130, 1030, 1058, 2647
- C. griseus* in 2648
- C. punctatus* in 2962
- C. sinanoensis* in 2966
- Demodex* spp. in, on man 1666
- Dermacentor* spp. in, on *Microtus* 496
- D. reticulatus* in, rickettsiae in 3399
- Diptera in
- on birds 1021
- on livestock 1055
- on man 1055
- Formica* spp. in, trematodes in 1068
- F. mesasiatica* in, trematodes in 3053
- Gamasinae in
- in rodent nests 1032
- on bats 1077
- on Rodentia 3389
- Gamasoidea in
- on mouse-like rodents 993
- on Sorex 1675
- Gasterophilidae in 154
- Gasterophilus* spp. in, on horse 442
- Haemaphysalis japonica* in 2734
- H. kutchensis* in, on Asio 3080
- Haematobia thirouxi* in, nematodes in 1891
- Hippoboscidae in 681
- Hoplopleura edentula* in, on *Clethrionomys* 343
- Hybomitra* spp. in, natural enemies of 156
- H. shnitnikovi* in 676
- Hypoderma* spp. in, on cattle 3330
- H. bovis* in, on cattle 440, 1590, 1591, 2689
- H. lineatum* in, on cattle 2689
- Hypodermatidae in 154
- insect fauna of, book 2826
- Ixodes persulcatus* in 493, 708, 1035, 1036, 1044, 1934
- viruses in 716
- I. ricinus* in
- on cattle 253
- rickettsiae in 3399
- I. trianguliceps* in 977, 2736
- Ixodidae in 1072, 1636, 2747, 3083, 3411
- on Rodentia 3389
- Latrodectus* spp. in 2778
- malaria in 86, 1041
- Melophagus kamtshaticus* in, on *Ovis* 446
- mites in, in mammal nests 1053
- Mus musculus* in, arthropod parasites of 1060
- Muscidae in, nematodes in 883
- Nosopsyllus* spp. in, on small mammals 3179
- N. laeviceps* in 815
- Oestridae in 154
- Oestroidea in, on livestock 2691
- Oestrus ovis* in, on sheep 3331
- Oribatei in, cestodes in 1051
- Ornithodoros* spp. in
- on Amphibia 3408
- on Reptilia 3408
- O. alactagalis* in 969, 970

**Union of Soviet Socialist Republics contd.**

- Peromyscosylla silvatica* in, on small mammals 1052
- Phlebotomus papatasi* in 2145
- viruses in 3307
- Piophilidae casei* in, on man 884
- Polyplax opimi* in, on *Rhombomys* 341
- Protocalliphora* spp. in, on *Turdus* 2708
- Rhinoestrus purpureus* in
- on horse 442
- on man 654
- Rhodacaridae in, book 1006
- Scelionidae in 2178
- Sergentomyia dentata* in 2145
- Simuliidae in 1067, 1076, 1079
- natural enemies of 1045, 1055, 1059
- Simulium* spp. in 1023, 1037
- natural enemies of 1054
- S. angustitarse* in, natural enemies of 1586
- S. mediterraneum* in 430, 642
- S. nigrum* in, on livestock 2973
- S. ornatum* in, natural enemies of 1586
- S. parargyreum* in 424
- S. pathrushevae* in 423
- S. pseudequinum* in 2663
- Siphonaptera in
- on *Microtus* 1026
- on *Rhombomys* 571
- on Rodentia 2868, 3389
- on small mammals 1042, 1049, 2871, 3184
- research on 2318
- small mammals in, arthropod parasites of 491, 1046
- Sphaeroceridae in 675
- Staphylinidae in, in dung 1057
- synanthropic flies in 899, 900, 1040
- Tabanidae in 205, 1024, 1070, 1079, 1376, 1616, 2409, 2692, 2694, 3348
- natural enemies of 1020, 1617, 3040, 3336, 3347
- on livestock 1078
- Tabanus autumnalis* in 1604
- natural enemies of 445, 2695
- T. bromius* in, natural enemies of 156, 2693
- T. golovi* in 1604
- tick-borne encephalitis in 1946, 3413
- tularemia in 496
- Wohlfahrtia magnifica* in, on sheep 3349
- Xenopsylla* spp. in 1516
- in gerbil burrows 1518
- X. conformis* in 356

**United Kingdom**

- Aculeata in 691
- Alphitobius diaperinus* in, in dwellings 486
- Anopheles atroparvus* in 3277
- Aphodius* spp. in
- in cattle dung 1383
- in dung 228
- birds' nests in, insects in 776
- Blatta orientalis* in, bacteria in 3157
- Blattaria in, in hospitals 1141
- buildings in, insect pests in 1139
- Carcinops pumilio* in, in dwellings 486
- Ceratophyllus gallinae* in, on man 2341
- Cercyon* spp. in, in cattle dung 1383
- Cheyletus woodroffei* in, in bat roosts 506
- Choriotopes bovis* in, on cattle 2761
- Cimex lectularius* in 1147
- Coleoptera in, in cattle dung 490
- Crataerina pallida* in, in dwellings 2696
- Ctenocephalides canis* in, on dog 2872
- C. felis* in
- on cat 2872
- on dog 2872
- Dermanyssus gallinae* in, on man 2242
- Dermatophagoides pteronyssinus* in, in bedding 1975
- Dermestes maculatus* in
- in dwellings 486
- in poultry housing 3057
- Diptera in, in dog dung 220
- Dryomyza anilis* in, in pheasant carcasses 2183
- dwellings in, arthropod pests in 331
- Euproctis chrysorrhoea* in, in railway embankments 3377
- Glossina* research in 871

## United Kingdom contd.

- Haemaphysalis punctata* in  
on cattle 3086  
on dog 3086  
sporozoans in 2472, 3398  
*Haematopinus suis* in, on pig 985  
*Haematopota pluvialis* in 3338  
hospitals in, pest control in 1146  
household pests in 7  
Hydrophilidae in, in dung 228  
*Hypoderma bovis* in, on cattle 653  
*H. lineatum* in, on cattle 653  
*Ixodes ricinus* in 3086  
on cattle 946, 2212  
sporozoans in 3398  
*I. trianguliceps* in, on small mammals 971  
*Limnophyes minimus* in, in sewage systems 2168  
malaria in 3277  
medical entomology in 2381  
Mesostigmata in 302  
*Metrocnemus hygroptericus* in, in sewage systems 2168, 2719  
mosquito research in 840, 2616, 2633  
*Musca domestica* in, in piggeries 467  
*Orchopeas howardii* in, on dog 2872  
*Paratanytarsus* spp. in, in water supply 2713  
*Pediculus capitis* in, on man 347, 1142, 1147  
*P. humanus* in, on man 1142, 1147  
pesticide use in 1432  
poultry housing in, arthropod fauna of 1717  
*Psoroptes ovis* in, on sheep 3101  
*Pthirus pubis* in, on man 1142, 1147  
*Sarcoptes scabiei* in  
on cattle 2761  
on man 1142, 1147  
on pig 985  
*Scaphophaga stercoraria* in, in cattle dung 1927  
Sepsidae in 2456  
*Simulium pseudoequinum* in 2670  
*Sphaeridium* spp. in, in dung 1928  
*Spilopsyllus cuniculi* in, on rabbit 2324  
*Sternostoma tracheacolum* in, on canary 2759  
*Trichocera saltator* in, in human cadavers 1602  
tsetse research in 3003  
*Vespa crabro* in 694  
veterinary entomology in 2650, 3048
- United States of America** (see also individual States)  
acarologists in, directory 2269  
arthropod cultures in, catalogue 1999  
entomologists in, directory 2269  
*Geomydoecus* spp. in, on *Thomomys* 3164  
human babesiosis in 3396  
pest management in, book 2833
- univittatus, Culex**
- Upper Volta**  
*Aedes aegypti* in 1714  
*Anopheles* spp. in 1708  
*Culex quinquefasciatus* in 644, 1714  
Culicidae in 2361  
*Dermanyssus* spp. in, on rabbit 2687  
*Glossina* spp. in 1304, 1696  
*G. palpalis* in 435, 873, 1088, 1323, 1324, 1326, 1698, 1699, 1875, 1884, 2986, 2987, 3004  
*G. tachinoides* in 435, 1875, 2401, 2982, 2983, 2986, 2987, 2988  
*Haemolaelaps* spp. in 3422  
*Hippobosca variegata* in 644  
*Mansonia* spp. in 1708  
onchocerciasis in 147  
*Psoroptes cuniculi* in, on rabbit 2687  
*Simulium* spp. in 147, 1704  
on man 2672  
sleeping sickness in 644  
trypanosomiasis in 1304
- Uranotaenia**  
*Coelomomyces quadrangulatus* in, in Taiwan 2031  
in Azerbaijan 852  
in Canada 1533
- Uranotaenia recondita** 2031  
**Uranotaenia sapphirina**, in USA 1820  
**Urate oxidase** (see Oxidase, urate)

## Urban areas

- Anopheles arabiensis* in, in Nigeria 765  
mosquito control in 832, 1712  
pest management in, book 2833  
synanthropic flies in, movement from livestock farms of 900
- urbana, Mydaea**
- Urea, (4-chlorophenyl)-**  
in *Lepomis macrochirus*, diflubenzuron metabolite 2109  
in natural waters, diflubenzuron product 2109
- Urethane polymers**  
*Alphitobius diaperinus* in, damage caused by 2204  
insecticide-impregnated cattle ear tags of 2430
- Uria aalge, Ixodes uriae** on, in Norway 702
- uriae, Ixodes**
- Uric acid** (see 1H-Purine-2,6,8(3H)-trione, 7,9-dihydro-)
- Uridine**  
in *Aedes togoi*, utilisation by *Brugia patei* of 68  
in *Anopheles atroparvus*, utilisation by *Brugia patei* of 68  
in mosquito cell lines, incorporation of 1568
- Urophonius**  
in Argentina 1477  
metasomatic glands in 524
- Uroplectes**  
in Zimbabwe 1428  
on man, stings by 1428
- Uropoda orbicularis**  
in Poland 1655  
on *Apodemus*, in Poland 1655  
on *Microtus*, in Poland 1655
- Uropsilus soriceps, Geusibia stenosinuata** on, in Yunnan 568
- Uroxys besti**  
sp. nov., description of 3379  
in Brazil 3379  
in *Bradypus tridactylus*, in Brazil 3379
- Ursicoptes procyoni**  
sp. nov., description of 737  
in USA 737  
on *Procyon lotor*, in Iowa 737
- Ursus americanus, Dirofilaria ursi** in 1296
- Urticaria**  
in man  
caused by *Latoia vivida* 485  
caused by *Triatoma infestans* 3167  
role of house-dust mites in 3108
- Utah**  
*Culex tarsalis* in 381  
Culicidae in 3212  
*Geomydoecus* spp. in, on *Thomomys* 1171  
*Tunga penetrans* in, on man 48  
western equine encephalitis in 381
- utia, Frontopsylla frontalis**
- Utricularia minor**, Culicidae and predators as affected by 1243
- Uukuniemi virus**  
in  
*Aedes albopictus*, persistent infection with 1839  
*Argas hermanni*, in Afghanistan 695  
*Ixodes ricinus*, transmission of 2233
- Uukuniemi viruses**, in, *Ixodes uriae*, in Norway 702
- vacca, Onthophagus**
- vagens, Coproica** (see *Leptocera vagans*)
- vagens, Culex**
- vagens, Leptocera (Coproica)**
- Valeric acid** (see Pentanoic acid)
- Valexon** (see Phoxim)
- L-Valine**  
in *Aedes togoi*, utilisation by *Brugia patei* of 68  
in *Anopheles atroparvus*, utilisation by *Brugia patei* of 68  
in *Psoroptes cuniculi* 2486  
in *Psoroptes ovis* 2486
- Vandalism**, protection of mosquito light-traps against 3283
- vandersandei, Schoengastia**
- Vanilla (flavouring), Periplaneta americana**  
olfactory responses to 797
- Vanuatu** (see New Hebrides)
- vanus, Anopheles**

## vanzyl, Strobiloestrus

- Vapona** (see Dichlorvos)
- variabilis, Dermacentor**
- variegata, Hippobosca**
- variegata, Odagmia** (see *Simulium variegatum*)
- variegatum, Amblyomma**
- variegatum, Simulium (Odagmia)**
- variipennis, Culicoides**
- variolus, Latrodectus**
- varipes, Chrysomya**
- varivestis, Epilachna**
- varuna, Anopheles**
- Vases, Culicidae** in, in Hokkaido 3271
- Vavraia culicis**  
in  
*Aedes aegypti*, infectivity of 2891  
*A. taeniorhynchus*, infectivity of 2891  
*Anopheles albimanus*, infectivity of 2891  
*Culex quinquefasciatus*, infectivity of 2891  
*C. salinarius*, infectivity of 2891  
*C. tarsalis*, infectivity of 2891  
*Heliothis zea*, culturing of 2891  
spores of, sunlight inactivation of 2891
- Vectors**  
control of 5, 6, 1692  
environmental management for 781  
microbial agents for 2799  
pollution caused by 1690  
role in human tropical disease control of 1693  
insecticide resistance in 2286  
research on, qualitative approaches to 2821  
spread of 328
- Vegetable oils** (see Plant oils)
- Vegetables**  
dichlorvos in, uptake from air of 2267  
naled in, uptake from air of 2267
- veltistshevi, Simulium (Wilhelmia)**
- veltistshevi, Wilhelmia** (see *Simulium veltistshevi*)
- Venezuela**  
*Aedes aegypti* in, in cemetery vases 2643  
*Anopheles nuneztovari* in 2068  
*Culex bahaicolus* in 2362  
*C. corniger* in, in cemetery vases 2643  
*C. johni* in 579  
*C. quinquefasciatus* in, in cemetery vases 2643  
Culicidae in 2061  
*Heliconia aurea* in, Culicidae in bracts of 1222  
*Lutzomyia trinidadensis* in 632  
*Mitonyssus* spp. in, on bats 2238  
*Panstrongylus lignarius* in 2577  
Phlebotominae in 419  
*Rhodnius* spp. in 1500  
*R. prolixus* in  
in dwellings 561  
trypanosomes in 37  
*Trichoprosopon digitatum* in 2362  
*Wyeomyia felicia* in 2362
- Venezuelan equine encephalitis** (see Encephalitis, Venezuelan equine)
- Venoms**  
*Androctonus amoreuxi* 306  
*A. australis* 742  
*A. mauretanicus* 2252, 2253, 2254  
*Apis mellifera* 231, 1389, 1929, 1930, 1933, 2455, 2458, 2459, 3381  
*Centruroides limpidus* 522  
*C. noxius* 2781  
*C. sculpturatus* 2499, 3114  
*Dolichovespula arenaria* 1389, 1930, 2455, 3381  
*D. maculata* 1389, 1930, 2455, 3381  
*Heterometrus fulvipes* 2784  
*H. scaber* 3434  
Hymenoptera 2205, 3052  
*Latrodectus antheratus* 3115  
*Leiurus quinquestriatus* 309, 742  
*Loxosceles laeta* 523  
*L. reclusa* 2498  
*Mesobuthus eupeus* 307  
*Naja mossambica* 200  
*Pogonomyrmex badius* 231  
*P. barbatus* 231  
*Polistes* 1930, 2455  
*Solenopsis invicta* 1388  
*Tityus serrulatus* 1677, 2780



**Venoms contd.**

- Vespa orientalis* 3051  
*Vespula* 1389, 1634, 1930, 2455  
*V. flavopilosa* 1386  
*V. germanica* 1386, 3381  
*V. maculifrons* 1386, 3381  
*V. squamosa* 1386  
*V. vulgaris* 1386, 3381  
*ventralis*, *Pherbellia*  
*ventricosa*, *Rhadinopsylla li*  
*ventricosus*, *Pyemotes*  
*venustum*, *Simulium*  
*venustus*, *Culicoides*  
*verbekei*, *Psacadina*  
**Verbenol** (see Bicyclo[3.1.1]hept-3-en-2-ol, 4,6,6-trimethyl-)  
*verecundum*, *Simulium*  
**Vermipssylla**  
 control of 1480  
 on livestock, in Mongolia 1480  
**Vermont**, Siphonaptera in, on *Glaucomys* 1514  
*vernalis*, *Acanthocyclops* (*Cyclops*)  
*vernalis*, *Cyclops* (see *Acanthocyclops vernalis*)  
*verrucosus*, *Ornithodoros*  
**Verthion** (see Fenitrothion)  
**Vesicular stomatitis virus**  
 in  
*Aedes albopictus*  
 defective interfering particles of 1834  
 replication of 1835  
**Vespa**  
 check-list of 484  
 common names of 2457  
**Vespa crabro**  
 foraging in 694  
 in Malta (?) 1384  
 in UK 694  
**Vespa crabro germana**  
 control of 1631  
 in USA 1631  
 mating in 1631  
 pheromones in 1631  
 preying on, *Vespula* spp., in Maryland 1631  
**Vespa orientalis**  
 enzymes in 3051  
 in Malta 1384  
 mid-gut in, presynaptic effects of extracts of 483  
 venom of 3051  
*vespertilionis*, *Argas*  
*vespertilionis*, *Ixodes*  
*vespertilionis*, *Lutzomyia*  
**Vespidae**  
 control of, traps for 895  
 in British Isles 691  
 in Malta 1384  
 on man, hypersensitivity to, diagnosis of 1389, 3383  
 venoms of, toxicity to mouse of 2205  
**Vespiinae**  
 book 484  
 in British Isles 484, 691  
**Vespoidea**, in British Isles 691  
**Vespula**  
 check-list of 484  
 common names of 2457  
 on man  
 arrhythmia caused by 915  
 hypersensitivity to 1386, 1634, 1930  
 diagnosis of 1389, 2455  
 on pig, effects of 914  
 preyed on by, *Vespa crabro*, in Maryland 1631  
 venoms of 1930, 2455  
 contaminants in 1634  
**Vespula arenaria** (see *Dolichovespula arenaria*)  
**Vespula flavopilosa**  
 in USA 487  
 nesting biology of 487  
 venom of 1386  
**Vespula germanica**  
 biology of 2460  
 control of 2460  
 in Canada 2460  
 in USA 2460  
 in USSR 3347  
 preying on, Tabanidae, in Tajikistan 3347

**Vespula germanica contd.**

- venom of 1386, 3381  
**Vespula maculata** (see *Dolichovespula maculata*)  
**Vespula maculifrons**  
 colonies of, usurped by *V. flavopilosa* 487  
 in USA 487, 3375  
 male behaviour in 3375  
 mating in 3375  
 nesting biology of 487  
 venom of 1386, 3381  
**Vespula squamosa**  
 in USA 487  
 queens of, taking over colonies of *V. flavopilosa* 487  
 venom of 1386  
**Vespula vulgaris**  
 colonies of, usurped by *V. flavopilosa* 487  
 in Irish Republic 2182  
 in Malta (?) 1384  
 in USA 487  
 preying on, *Hydrotaea irritans*, in Irish Republic 2182  
 venom of 1386, 3381  
**Veterinary clinics**, Diptera in, in Yugoslavia 901  
**Veterinary science**, thesaurus 1990, 1991, 1992, 1993, 1994  
*vetustissima*, *Musca*  
*vexans*, *Aedes*  
*vicarius*, *Oeciacus*  
*viciae*, *Megoura*  
*vicina*, *Calliphora*  
*vicina*, *Musca domestica* (see *M. d. domestica*)  
**Victoria**  
*Calliphora augur* in 2698  
 Culicidae in 1214  
*Lucilia cuprina* in, on sheep 2199  
 sheep in, fly control on 163  
*vidourlensis*, *Culicoides*  
*vieta*, *Schoengastia*  
**Vietnam**  
*Afrolabidocarpus vietnamensis* in, on *Hippodideros* 2484  
 Sarcophagidae in 3337  
*vietnamensis*, *Afrolabidocarpus*  
**Vinblastine**, in *Lucilia sericata*, inhibiting sugar receptors 461  
*vindemiae*, *Pachycrepoides*  
*virescens*, *Heliothis*  
*virgatum*, *Simulium*  
**Virgin Islands**  
*Amblyomma variegatum* in 958  
 Scorpiones in 1008  
*Stomoxys calcitrans* in 1090  
**Virgin River virus**, in, *Anopheles freeborni*, in Arizona 2949  
**Virginia**  
 Ixodidae in 711  
*Toxorhynchites rutilus* in 1210  
*Vespula* spp. in, on man 915  
*viridis*, *Orthellia* (see *O. cornicina*)  
**Viruses and virus diseases**  
 of arthropods  
*Aedes aegypti* 105, 3192  
*A. cantator* 2893  
*A. epactius* 63  
*A. sollicitans* 2882  
*A. stramineus* 3288  
*A. taeniorhynchus* 1819  
*Anopheles* spp. 3194  
*Apis mellifera* 3  
*Chironomus decorus* 448  
 Culicidae 1025, 1038  
 medically-important arthropods, bibliography 2517  
*Musca domestica* 1925  
*Panstrongylus megistus* 808  
*Periplaneta fuliginosa* 22, 547  
 Simuliidae 144  
*Triatoma infestans* 808  
*Zeiraphera diniana* 2839  
 defence mechanisms against 544  
 insect control using 3, 3118  
 review 1680  
 mammal cell lines not affected by 1034  
 review 525  
 role in population dynamics of 2839

**Viruses and virus diseases contd.**

- of vertebrates  
 arthropod-transmitted, spread of 328  
 insect transmission of 3  
**vishnui**, *Culex*  
**Vision**, insects, book 2004  
**Vitellins**  
 in *Aedes atropalpus* oocytes, hormonal regulation of deposition of 125  
 in *Blattella germanica* 2007  
 in *Calliphora vicina*, properties of 2704  
**Vitellogenins**  
 in *Aedes aegypti* 91  
 effects of growth regulators on synthesis of 3268  
 regulation of synthesis of 2613  
 in *Aedes atropalpus* 91  
 in *Calliphora vicina*, properties of 2704  
 in *Culex nigripalpus* 91  
 in *Gambusia affinis*, DDT inducing synthesis of 3129  
 in *Haematobia irritans* ovaries 898  
 in *Leucophaea maderae* fat-body JH stimulating synthesis of 24  
 role of JH in synthesis of 1732  
 in *Sarcophaga bullata*, moulting hormones inducing synthesis of 2701  
 in *Sarcophaga bullata* hemolymph, effects of abscisic acid on 3360  
**Vitis vinifera** (see Grapevine)  
*vitripennis*, *Musca*  
*vitripennis*, *Nasonia*  
*vittatum*, *Simulium*  
*vittatus*, *Aedes*  
*vittatus*, *Aphodius*  
*vituli*, *Linognathus*  
*vivericola*, *Leptotrombidium*  
*vidua*, *Latoia*  
**Volcanic ash**, insecticidal activity of 3126  
**Vole**  
 diazinon in, toxicity of 1718  
 4-74 in, toxicity of 1718  
**Vole, bank** (see *Clethrionomys glareolus*)  
**Vole, Brandt's** (see *Microtus brandti*)  
**Vole, common** (see *Microtus arvalis*)  
**Vole, field**  
*Callopsylla caspia* on, in Caucasus 355  
*Yersinia pestis* in, in Caucasus 355  
**Vole, gray-tailed** (see *Microtus canicaudus*)  
**Vole, pine** (see *Microtus pinetorum*)  
*Vombatus ursinus*, *Railletia australis* on, in Australia 3102  
*vomitioria*, *Calliphora*  
*vonwredei*, *Loxosceles*  
*vulgare*, *Simulium*  
*vulgaris*, *Argas*  
*vulgaris*, *Paravespula* (see *Vespula vulgaris*)  
*vulgaris*, *Vespula* (*Paravespula*)  
**Vulpes fulva**  
*Malassezia pachydermatis* in, in New York State 2240  
*Sarcoptes scabiei* on, in New York State 2240  
**Vulpes vulpes**, *Chaetopsylla matina* on, in Czechoslovakia 1752  
**vulpis**, *Felicola*  
**Wad Medani virus**  
 in  
*Amblyomma cajennense*, in Jamaica 845  
*Hyalomma anatolicum*, in Iran 1637, 2211  
**Walchia acutascuta**  
 sp. nov., description of 1003  
 in China 1003  
 on *Apodemus agrarius*, in Kiangsu 1003  
**Walchia globosensilla**  
 sp. nov., description of 1003  
 in China 1003  
 on *Apodemus agrarius*, in Kiangsu 1003  
**Walchia jiangxiensis**  
 sp. nov., description of 3100  
 in China 3100  
 on *Apodemus agrarius*, in China 3100  
 on *Rattus*, in China 3100  
**Walchiella impar**  
 in Philippines 3428  
 on *Apomys*, in Philippines 3428  
 on *Rattus bagobus*, in Philippines 3428  
**Walchiella oudemansi**  
 in Philippines 3428  
 on *Rattus bagobus*, in Philippines 3428  
*walkerae*, *Argas*

- walkerii, Anopheles**  
**Wallabia agilis, Schoengastia bicoxalae** on, in Papua New Guinea 3426  
**Wanowrie virus**, in, *Hyalomma asiaticum*, in Iran 1637, 2211  
**Warbex** (see Famphur)  
**warburtoni, Haemaphysalis**  
**Washington State**  
*Aedes togoi* in, in rock pools 2927  
*Calliphora* spp. in, on pheasant 2186  
*Chatia cunninghamiae* in, on *Tamiasciurus* 3095  
*Eadidea neurotrichus* in, on *Neurotrichus* 2236  
*Wohlfahrtia* spp. in, on pheasant 2186  
**Wasp, paper** (see *Polistes*)  
**Waste water**, sprinkler irrigation with, effects on mosquitoes of 2368  
**Water**, in *Glycyphagus domesticus*, regulation of 1969  
**Water buffalo** (see Buffalo, Asian)  
**Water containers**  
*Aedes* spp. in, in Nigeria 2895  
*Culicinae* in, in Nigeria 602  
mosquito control in, covers for 115  
**Water hemlock** (see *Cicuta douglasii*)  
**Water management**  
*Culex pipiens* and 2370  
for vector control 781  
role in fly control of 532  
role in mosquito control of 3207, 3208, 3228  
**Water pollution, Gambusia** as affected by 2346  
**Water supply**  
*Paratanytarsus* spp. in, in England 2713  
pest control in, pyrethroids for 2713  
**Water tanks, Aedes aegypti** in, in West Malaysia 1800  
**Waters, natural**  
*Bacillus thuringiensis* in, contamination by 1249  
diflubenzuron in, residues of 2109  
insecticides in, residues of 1709  
pesticide pollution of 1690  
**Waters, potable, Bacillus thuringiensis**, tolerance limits for 1249  
**watteni, Aedes**  
**wauensis, Guntheria**  
**Waxes and waxy substances**  
in insect cuticle, analysis of dimethylalkanes in 2277  
in *Musca domestica* cuticle, role in insecticide resistance of 198  
in *Solenopsis invicta* post-pharyngeal glands 2203  
**Wed Medani virus**  
in  
*Rhipicephalus evertsi*, in West Africa 704  
*R. guilhoi*, in West Africa 704  
**weedunnarti, Guntheria**  
**weida, Hystrichopsylla**  
**Weiseria spinosa**, taxonomy of, transferred to *Diffingiera* 1890  
**Wells**  
*Anopheles stephensi* in, in Tamil Nadu 2373  
*Culex quinquefasciatus* in, in Tamil Nadu 2600  
**wenxianensis, Chaetopsylla**  
**West Indies, Atopomelidae** in 286  
**West Nile virus**  
in  
*Aedes aegypti*, replication of 89  
*A. albopictus*  
infectivity of 1526  
replication of 89  
*A. pseudoscutellaris*, replication of 89  
*Anopheles maculipennis*, transmission of 2233  
*Crocidea russula*, in Spain 2233  
*Culex tritaeniorhynchus*  
infectivity of  
effects of adult age on 3233  
effects of rearing conditions on 3233  
*C. vishnui*, in Andhra Pradesh 3276  
man, antibodies to 1947  
**West Virginia**  
*Culicidae* in 1805  
*Leptinus americanus* in, on *Blarina* 3378  
*Orthopodomyia alba* in 1821  
**Western Australia**  
*Boopidae* in, on Marsupialia 2565  
*Calliphoridae* in, on sheep 165  
*Culicoides brevitarsis* in 2142  
*Demodex* spp. in, on cat 3104  
*Laelapinae* in 1653  
*Laelaps* spp. in, on *Pseudomys* 508  
sheep in, fly control on 163  
**Western equine encephalitis** (see Encephalitis, western equine)  
**Western Samoa, Aedes spp. in 1236  
**whartoni, Neotrombicula**  
**whartoni, Schoengastia**  
*Whartonia brevis*, taxonomy of 730  
**Whartonia dewitti**  
sp. nov., description of 730  
in Malaysia 730  
in Thailand 730  
on *Rhinolophus affinis* 730  
**Whartonia hainana**, taxonomy of 730  
**Whartonia kulamadouensis**  
sp. nov., description of 2235  
in Indonesia 2235  
in Papua New Guinea 2235  
on *Dobsonia moluccensis*, in Irian Jaya 2235  
on *Dobsonia pannietensis*, in Papua New Guinea 2235  
**Whartonia penthetor**  
descriptions of 2235  
on *Penthetor lucasi* 2235  
taxonomy of, lectotype for 2235  
**Whartonia teongwahi**  
sp. nov., description of 730  
in Indonesia 730  
on *Hipposideros larvatus*, in Indonesia 730  
on *Rhinolophus acuminatus*, in Indonesia 730  
**Wheat (Triticum spp.)**  
**Wheat bran**, bait component for, *Musca domestica* 3017  
**wheeleri, Amitermes**  
**whitmorei, Culex**  
**Whitneyomyia beatifica**, in USA 661  
**Whitneyomyia beatifica atricorpus** (see *W. beatifica*)  
**Wildebeest** (see *Connochaetes taurinus*)  
**Wildlife, pesticides** in, non-target effects of 1987  
**Wildlife areas**  
*Aedes* spp. in, in California 2121  
mosquito control in, integrated 2121  
**Wilhelmia** (see *Simulium*)  
in England 2670  
in USSR 1586  
**Wilhelmia equina** (see *Simulium equinum*)  
**Wilhelmia lineata** (see *Simulium lineatum*)  
**Wilhelmia mediterranea** (see *Simulium pseudoequinum*)  
**Wilhelmia salopienensis** (see *Simulium lineatum*)  
**Wilhelmia veltistishevi** (see *Simulium veltistishevi*)  
**williamsi, Geomydoecus**  
**williwilli, Culicoides**  
**wirthi, Corethrella**  
**Wisconsin**  
*Aedes triseriatus* in, on man 2935  
*Chironomidae* in, on man 912  
*Ixodes dammini* in 269  
mosquito control in 3209  
*Siphonaptera* in, on *Rattus* 2304  
*Trixacarus caviae* in, on guinea-pig 1979  
*Vespula maculifrons* in 3375  
**wittei, Laelaps**  
**Wohlfahrtia**  
*Clostridium botulinum* in, in Washington State 2186  
on pheasant, in Washington State 2186  
**Wohlfahrtia intermedia**, in China 213  
**Wohlfahrtia magnifica**  
control of, insecticides for 3349  
in USSR 3349  
on sheep, in Kazakhstan 3349  
**Wood, pest control** in, book 7  
**woodi, Ixodes**  
**Woodland**  
*Aedes* spp. in, vertical distribution of 1212  
*Culex* spp. in, vertical distribution of 1212  
**Woodland, Acacia**, endosulfan in, effects on birds of 872  
**Woodland, deciduous**  
*Glossina morsitans* in, in Zimbabwe 1882  
*G. pallidipes* in, in Zimbabwe 1882  
**Woodland, mixed, Ixodes trianguliceps** in, in Ukraine 2736  
**Woodland, oak, Haemaphysalis concinna** in, in Italy 3062  
**Woodland, riverine**  
*Glossina morsitans* in, in Zimbabwe 1882  
*G. pallidipes* in, in Zimbabwe 1882  
**woodroffei, Cheyletus**  
**Wuchereria bancrofti**  
control of  
filaricides for 1794  
vector control for 409, 1794, 2048, 2600  
in  
*Aedes* spp., in Tonga 1236  
*A. aegypti*  
morphology of 605  
uptake from man of 2589  
*A. polynesiensis*  
pathogenicity of 121  
permeability of gut to 120  
uptake from man of 2589  
*Anopheles funestus*, pathogenicity of 121  
*A. gambiae*, pathogenicity of 121  
*A. subpictus*, infectivity of 1777  
*Culex pipiens*, in Egypt 3293  
*C. quinquefasciatus*  
in Andhra Pradesh 2599  
in Bihar 2888  
infectivity of 1205  
strain differences in 1795  
pathogenicity of 121  
permeability of gut to 120  
transmission of 2138  
uptake from man of 2589  
man  
effects of solar eclipse on 3223  
in Andhra Pradesh 102, 2599  
in Costa Rica 2138  
in Egypt 3293  
in French Guiana 1154  
in Liberia 409, 1794  
morphology of 605  
rodents, morphology of 605  
vectors of 2801  
**wui, Phlebotomus major**  
**wuzhishanensis, Haematopota**  
**Wyeomyia**  
in Canada 1533  
in Quebec 2881  
larvae of, distinguishing instars of 2611  
**Wyeomyia felicia**  
in Venezuela 1222, 2362  
in *Heliconia aurea* bracts, in Venezuela 1222  
in *Heliconia aurea* floral bracts, in Venezuela 2362  
**Wyeomyia smithii**  
autogeny in 66  
blood-feeding in 66  
development in, effects of temperature on 839  
diapause in 61  
environmental heterogeneity in 587  
fecundity in, effects of temperature on 839  
in Canada 98  
in USA 66, 587, 839  
in *Sarracenia purpurea* pitchers  
in Michigan 587  
in New York State 839  
in Newfoundland 98  
life-span in, larval influences on 1224  
oviposition in 98  
photoperiodism in 61  
reproduction in, larval influences on 1224  
**Romanomeris nielsenii** in, pathogenicity of 1817  
**Wyoming**  
cattle in, pest control on 2525  
mosquito control in 3210  
*Oeciacus vicarius* in, on man 44  
sheep in, pest control on 2524**



- X-rays**  
effects of, on  
*Anopheles pharoensis* 578  
*Periplaneta americana* 1169
- Xanthine** (see 1H-Purine-2,6-dione, 3,7-dihydro-)
- Xanthine dehydrogenase** (see Dehydrogenase, xanthine)
- Xanthommatin**, in *Lucilia cuprina*, effects of eye colour mutations on 2195
- Xanthotoxin** (see 7H-Furo[3,2-g][1]benzopyran-7-one, 9-methoxy-)
- Xenopsylla**  
forecasting of 1516  
in Karnataka 2470  
in *Rhombomys opimus* burrows, distribution pattern of 1518  
on *Rhombomys opimus*, in Kazakhstan 1516  
tracheoles in 2835
- Xenopsylla brasiliensis**  
in Burundi 49  
in Tanzania 2030  
on rodents, in Tanzania 2030
- Xenopsylla cheopis**  
bacteria in, parenteral infection with 1515  
control of  
biological 1186  
insecticides for 565, 1190, 2325, 2819, 2868, 3188  
DDT resistance in, in Java 565, 1190, 2819  
fecundity in, effects of host on 1061  
feeding response specificity in 2326  
*Hepatozoon erhardovae* in, development of 2331  
*Hymenolepis diminuta* in, infectivity of 366  
in Burundi 49  
in Indonesia 565, 817, 1190, 1963, 2819, 3188  
in Mexico 1130  
in Morocco 3183  
in Tanzania 2030  
in USSR 2868  
on *Microtus mexicanus*, in Mexico 1130  
on nude hosts 2333  
on *Rattus rattus*  
in Java 3188  
in Morocco 3183  
on Rodentia  
in Caucasus 2868  
in Indonesia 1963  
in Java 2819  
in Tanzania 2030  
on small mammals, in Java 817  
phagostimulants for 1471  
*Rickettsia mooseri* in, electron microscopy of 2320  
*R. prowazekii* in, not transmitted 3066  
rickettsiae in, symbiotic 2320  
*Yersinia pestis* in  
persistence of 359  
transmission of 2317
- Xenopsylla conformis**  
in Iran 364  
in USSR 356  
population age-structure in 356  
*Yersinia pestis* in, in Iran 364
- Xenopsylla cunicularis**  
in France 2335  
in Portugal 2336  
on *Oryctolagus cuniculus*  
in France 2335  
in Portugal 2336  
seasonal abundance of 2336
- Xenopsylla debilis**  
in Kenya 1513  
on *Tatera nigricauda*, in Kenya 1513
- Xenopsylla difficilis**  
in Kenya 1513  
on *Tatera nigricauda*, in Kenya 1513  
*Paraceroglyphus* spp. on, in Kenya 1513
- Xenopsylla gerbilli**  
in USSR 571  
on *Rhombomys opimus*, assessing infestations of 571
- Xenopsylla hirtipes**  
in USSR 571  
on *Rhombomys opimus*, assessing infestations of 571
- xinjiangensis**, *Haemaphysalis*
- D-Xylose**, *Musca autumnalis* feeding responses to 474
- yahense**, *Simulium*
- yanbarensis**, *Topomyia*
- yasguri**, *Cheyletiella*
- Yeast**  
diet component for  
*Forcipomyia taiwana* 418  
*Musca domestica* 3356
- Yeast extract**, *Phormia regina* feeding responses to 1619
- Yellow fever**  
in Africa, review 2956  
in French Guiana, not found 1154  
virus  
control of, vector control for 2285  
in  
*Aedes aegypti*  
estimating infection rate with 831  
in Gambia 2037, 2038  
replication of 2637  
transmission of 2637  
*A. africanus*, in Central African Republic 3295  
*A. opok*, in Central African Republic 3295  
*Amblyomma variegatum*, in Central African Republic 1411  
*Caluromys* spp., in Brazil 2627  
*Cebus* spp., in Brazil 2627  
*Haemagogus* spp., in Brazil 2627  
man, in Gambia 393, 2037, 2038  
mosquito cell lines, replication of 2348  
vectors of, control of 2348
- Yellowjacket** (see *Dolichovespula* and *Vespula*)
- Yersinia enterocolitica**  
in  
Diptera, transmission of 880  
pig, in Japan 880  
*Xenopsylla cheopis*, parenteral infection with 1515
- Yersinia pestis** (see also Plague)  
control of, vector control for 50  
in  
*Callosylla caspia*, in Caucasus 355  
*Catallagia sculleni*, in California 2319  
*Ceratophyllus lebedewi*, in Kirgizia 1688  
field vole, in Caucasus 355  
man, in USA 2317  
*Meriones persicus*, in Iran 364  
*M. vinogradovi*, in Iran 364  
*Mesocricetus brandti*, in Iran 364  
*Microtus mexicanus*, resistance to 1130  
*Neotoma cinerea*, in California 2319  
*Nosopsyllus iranys*, in Iran 364  
*Opisodasys keeni*, in California 2319  
*Oropsylla silantiewi*, in Kirgizia 1688  
*Peromyscus maniculatus*, in California 2319  
*Rhadinopsylla li*, in Kirgizia 1688  
Siphonaptera, pathogenicity of 1043  
*Thraxsis fatus*, transmission of 1753  
*Xenopsylla cheopis*  
parenteral infection with 1515  
persistence of 359  
transmission of 2317  
*X. conformis*, in Iran 364  
vectors of 2801  
feeding apparatus for 1185
- Yersinia pseudotuberculosis** (see *Y. rodentium*)
- Yersinia rodentium**  
in  
*Hyalomma marginatum*, effects on respiration of 250  
*Xenopsylla cheopis*, parenteral infection with 1515
- yezoense**, *Prosimulium*
- yosanoi**, *Odontacarus*
- Yugoslavia**  
*Anopheles* spp. in 599, 3285  
*Culicoides* spp. in 414  
*Dermacentor reticulatus* in, bacteria in 237  
*Formica gagates* in, trematodes in 688  
Ixodoidea in 701  
*Lucilia caesar* in 221  
*L. illustris* in 221  
Phlebotominae in 137
- Yugoslavia contd.**  
*Pyemotes zwoelferi* in, in dried flowers 1967  
synanthropic flies in 901
- yui**, *Leptotrombidium*
- yuilli**, *Lutzomyia*
- yunnanensis**, *Ascoschoenogastia*
- yunnanensis**, *Hystriochopsylla weida*
- yunnanensis**, *Leptotrombidium*
- yunnanus**, *Cratynus*
- zacatecae**, *Geomydoecus*
- Zacco platypus**  
preying on  
*Anopheles sinensis*, and biological control using 1728  
*Culex* spp., and biological control using 1728
- zachvatkini**, *Hirsutiella* (see *Neotrombicula zachvatkini*)
- zachvatkini**, *Neotrombicula* (*Hirsutiella*)
- Zaire**  
*Cordylobia anthropophaga* in, on man 2417  
*Gahrliepia pyriformis* in, on  
*Micropotamogale* 2769  
Scarabaeidae in, in dung 1392  
Simuliidae in 2673  
*Simulium albivirgatum* in, nematodes in 1847
- zalophi**, *Demodex*
- Zalophus californianus**  
*Demodex zalophi* on, effects of 2228, 2229  
*Orthohalarachne diminuta* on, in Japanese zoo 1423
- Zambia**  
*Demodex* spp. in, on domestic animals 1333  
*Glossina* spp. in 1308, 1333  
*G. morsitans* in 2161  
*Ixodes calcarhebes* in, on *Praomys* 249  
*Sarcoptes* spp. in, on domestic animals 1333  
*Strobiloestrus vanzyli* in, on *Kobus* 1338  
trypanosomiasis in 1308  
tsetse control in 1097
- zammitii**, *Aedes*
- zea**, *Heliothis*
- Zea mays** (see Maize)
- Zeaxanthin** (see  $\beta$ , $\beta$ -Carotene-3,3'-diol, (3R,3'R)-)
- Zebu** (*Bos indicus*)  
*Anaplasma marginale* in, in Australia 938  
arthropod pests of, in Malaysia 2538  
*Boophilus microplus* on  
in Australia 938  
in Queensland 259  
tick control on 259
- Zeiraphera diniana**, granulosis virus in, role in population dynamics of 2839
- zeylanica**, *Sergentomyia*
- ziemannii**, *Anopheles*
- Zimbabwe**  
*Arcyophora* spp. in, on cattle 1632  
*Argas brumpti* in, on man 1942  
Buthidae in 1428  
entomology in 1405  
*Glossina morsitans* in 152, 436, 647, 1881, 1882  
on cattle 2997  
*G. pallidipes* in 152, 436, 647, 1881, 1882  
on cattle 2997  
Ixodoidea in 1638  
Ixodoidea in, on cattle 937  
medical entomology in 2006
- Zinc**, in *Simulium ornatipes*, effects on water relations of 2393
- Ziziphin**  
in *Phormia regina*, effects on chemoreceptors of 1613  
in *Ziziphus jujuba* 1613
- Ziziphus jujuba**, ziziphin in 1613
- Zolone** (see Phosalone)
- Zoo animals**  
birds, *Laminioptes* spp. on, in Antwerp Zoo 3423  
*Loxodonta africana*, *Ruttenia loxodontis* on, in Czech zoo 2451  
*Uncia uncia*, *Demodex cati* on, in San Antonio Zoo 2234

**Zoo animals contd.***Zalophus californianus**Demodex zalophi* on, effects of 2228,  
2229*Orthohalarachne diminuta* on, in  
Honshu 1423**Zooflagellata**, book 2259**Zoological gardens**

Diptera in

in India 3189

in Java 3189

in Tanzania 3189

fly control in 3189

**Zoomastigina**, in, Triatominae, in Paraguay  
3174**Zooplankton**

Culicid larvae eating 3263

in swamps, effects of endosulfan on 2163

preyed on by, fish 1543

**ZR-0515** (see Methoprene)**ZR-0619** (see Triprene)**ZR-0777** (see Kinoprene)*zwoelferi*, *Pyemotes**Zygodontomys lasiurus*, *Polygenis tripus* on,  
in Brazil 3185*Zygoribatula cognata*

Anoplocephalata in, in Azerbaijan 1051

in USSR 1051

in pastures, in Azerbaijan 1051

*Zygoribatula frisiae*

Anoplocephalata in, in Azerbaijan 1051

in USSR 1051

in pastures, in Azerbaijan 1051

*Zyzomys argurus*, *Laelaps synnomus* on, in  
Western Australia 1653*Zyzomys woodwardi*, *Laelaps angiodes* on,  
in Western Australia 1653**4-74**

against

*Argas persicus*, in fowl housing 1718*Cimex lectularius*, in fowl housing  
1718

in guinea-pig, toxicity of 1718

in poultry, toxicity of 1718

in vole, toxicity of 1718

SUBJECT INDEX PREPARED BY A M WOOD















# CAB PUBLICATIONS AND SERVICES

## Main Journals

The abstract journals form one part of a range of services in agricultural science provided by CAB, and will contain in 1982 a total of 180,000 abstracts and titles. With records derived from over 8,500 serials and many other publications, the journals constitute the only comprehensive coverage in English of the world literature on agriculture and related sciences. Readers' comments on the journals, their subject and literature coverage, are welcomed.

## Specialist Journals

In response to demand, CAB has launched a new series of journals for the specialist research worker; some cover multidisciplinary topics, others deal with a single crop or product. Records for these journals are selected from the CAB database, and may be supplemented by relevant items from collaborating organizations.

## Magnetic Tapes

Since 1973 (1972 in Animal Health) the journals have been produced by computer techniques. The consolidated database, now containing over 1,300,000 records and increasing by 12,000 each month, is available on magnetic tape. Complete sets of tapes or parts corresponding to selected subjects may be leased. Prices and sample tapes on request.

## Online Services

The CAB database, known as CAB ABSTRACTS, is accessible through Lockheed's computer based DIALOG Information Service, the ESA/QUEST system and DIMDI. Online access to CAB ABSTRACTS provides a rapid and highly efficient method of obtaining references to papers published since 1972-73.

## CAB Search Services

CAB scientists who compile the CAB database will also carry out searches for customers. The basic charge is £25 plus £0.10 per abstract retrieved. A regular monthly SDI service can be supplied for £100 per year for up to 50 references per month.

## Annotated Bibliographies

4,000 Annotated Bibliographies already available provide information on specific topics.

## Other Publications

A wide range of books, review articles, technical communications and reports are published. Write for our catalogue.

## Document Delivery Service

Most original articles abstracted in CAB journals are available as photocopies. Order forms are printed in each journal or are available in bulk from CAB. Online document ordering is also available through Lockheed's DIALOG ORDER and ESA's PRIMORDIAL services.

## Ordering Information

Subscriptions should be fully paid by 1st December for the volumes to be issued in the following year.

Many journals are available at special rates to subscribers in CAB member countries which are listed below. Please write for details.

A subscription provides entitlement to monthly (or quarterly) parts plus annual indexes. Rates include packing and mailing by air post to distant countries wherever the cost can be absorbed. Orders should be sent to:

CENTRAL SALES  
COMMONWEALTH AGRICULTURAL BUREAUX  
FARNHAM HOUSE, FARNHAM ROYAL, SLOUGH SL2 3BN, UK.  
Tel: Farnham Common (02814) 2281 Telex: 847964 Cables: Comag, Slough

## Member Countries of CAB

Australia  
Bangladesh  
Botswana  
Canada  
Cyprus  
Dependent Territories  
Fiji  
Ghana

Guyana  
India  
Jamaica  
Kenya  
Malawi  
Malaysia  
Mauritius

New Zealand  
Nigeria  
Papua New Guinea  
Sierra Leone  
Solomon Islands  
Sri Lanka  
Tanzania

The Bahamas  
The Gambia  
Trinidad & Tobago  
Uganda  
United Kingdom  
Zambia  
Zimbabwe



# CAB ABSTRACT JOURNALS AND SERIAL PUBLICATIONS

## 1982

|   | Frequency | Annual rates<br>(paper or microform)<br>£ | New subscriber rates<br>£ |
|---|-----------|---|---------------------------|
| <b>Main abstract journals</b>   |           |   |                           |
| Agricultural Engineering Abstracts  | M         | 81  | 81                        |
| Animal Breeding Abstracts   | M         | 146                                       | 95                        |
| Arid Lands Development Abstracts  | M         | 146                                       | 146                       |
| Dairy Science Abstracts   | M         | 151                                       | 98                        |
| Field Crop Abstracts  | M         | 189                                       | 123                       |
| Forestry Abstracts  | M         | 146                                       | 95                        |
| Forest Products Abstracts   | M         | 70  | 46                        |
| Helminthological Abstracts. A — Animal Helminthology  | M         | 124                                       | 81                        |
| B — Plant Nematology  | Q         | 43  | 28                        |
| Herbage Abstracts   | M         | 108                                       | 70                        |
| Horticultural Abstracts   | M         | 205                                       | 133                       |
| Index Veterinarius  | M         | 211                                       | 137                       |
| § Leisure Recreation & Tourism Abstracts  | Q         | 43  | 43                        |
| Nutrition Abstracts & Reviews. A — Human & Experimental   | M         | 184                                       | 120                       |
| B — Livestock Feeds & Feeding   | M         | 124                                       | 81                        |
| Plant Breeding Abstracts  | M         | 227                                       | 148                       |
| Protozoological Abstracts   | M         | 86  | 86                        |
| Review of Applied Entomology. A — Agricultural  | M         | 130                                       | 85                        |
| B — Medical & Veterinary  | M         | 65  | 42                        |
| Review of Medical & Veterinary Mycology   | Q         | 54  | 35                        |
| Review of Plant Pathology   | M         | 130                                       | 85                        |
| Rural Development Abstracts   | Q         | 43  | 43                        |
| Rural Extension, Education and Training Abstracts   | Q         | 40  | 40                        |
| Soils & Fertilizers   | M         | 184                                       | 120                       |
| Veterinary Bulletin   | M         | 167                                       | 109                       |
| Weed Abstracts  | M         | 92  | 60                        |
| World Agricultural Economics and Rural Sociology Abstracts  | M         | 146                                       | 95                        |
| <b>Primary journal</b>  |           |   |                           |
| Bulletin of Entomological Research  | Q         | 65  | 42                        |
| <b>Specialist abstract journals</b>   |           |   |                           |
| Cotton & Tropical Fibres Abstracts  | M         | 35  | 23                        |
| Crop Physiology Abstracts   | M         | 102                                       | 66                        |
| Faba Bean Abstracts (new in 1981)   | Q         | 28  | 18                        |
| Irrigation & Drainage Abstracts   | Q         | 42  | 27                        |
| Maize Quality Protein Abstracts   | Q         | 12  | 8                         |
| Ornamental Horticulture   | M         | 42  | 27                        |
| Plant Growth Regulator Abstracts  | M         | 54  | 35                        |
| Potato Abstracts  | M         | 43  | 28                        |
| Poultry Abstracts   | M         | 72  | 47                        |
| Rice Abstracts  | M         | 54  | 35                        |
| Seed Abstracts  | M         | 60  | 39                        |
| Small Animal Abstracts  | Q         | 30  | 20                        |
| Sorghum and Millets Abstracts   | M         | 24  | 16                        |
| Soyabean Abstracts  | M         | 42  | 27                        |
| Triticale Abstracts   | Q         | 18  | 12                        |
| Tropical Oil Seeds Abstracts  | M         | 30  | 20                        |
| <b>Serial publications</b>  |           |   |                           |
| Animal Disease Occurrence   | H         | 43  | —                         |
| Bibliography of Systematic Mycology   | H         | 8   | —                         |
| Biocontrol News & Information   | Q         | 36  | 23                        |
| Descriptions of Pathogenic Fungi and Bacteria   | Q         | 11  | —                         |
| Descriptions of Plant Viruses   | A         | 5   | —                         |
| Distribution Maps of Pests  | H         | 19  | —                         |
| Distribution Maps of Plant Diseases   | H         | 11  | —                         |
| Index of Fungi  | H         | 13  | —                         |
| Lentil Abstracts  | A         | 6   | —                         |
| Forestry Card Title Service:  |           |   |                           |
| Full Service (FA & FPA)   | M         | 103                                       | 67                        |
| Forestry Abstracts only (FA)  | M         | 78  | 51                        |
| Forest Products Abstracts only (FPA)  | M         | 43  | 28                        |
| Comprehensive Pig Information Service (write for details)   | —         | 75  | 75                        |
| Index of Current Research on Pigs only  | A         | 10  | 10                        |
| Pig News and Information only   | Q         | 25  | 25                        |
| Food Science and Technology Abstracts Complete  | M         | 330                                       | —                         |
| Single parts  | —         | 33  | —                         |
| Annual Cumulated Index  | A         | 72  | —                         |
| A — Annual                      H — Half year                      M — Monthly                      Q — Quarterly |           |   |                           |
| § Formerly Rural Recreation & Tourism Abstracts   |           |   |                           |

CENTRAL SALES  
COMMONWEALTH AGRICULTURAL BUREAUX  
FARNHAM HOUSE, FARNHAM ROYAL, SLOUGH SL2 3BN, UK.  
Tel. Farnham Common (028 14) 2662. Telex: 847964. Cables: Comag, Slough